

# **PERFORMANCE OF DIGITALIZATION IN NEPALESE COMMERCIAL BANKING SECTOR**

A Dissertation submitted to the Office of the Dean, Faculty of Management in partial  
fulfillment of the requirements for the Master's Degree

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## CERTIFICATION OF AUTHORSHIP

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled “**Performance of Digitalization in Nepalese Commercial Banking Sector**”. The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor has it been proposed and presented as part of requirements for any other academic purposes.

The assistance and cooperation that I have received during this research work has been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of the dissertation.

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## REPORT OF RESEARCH COMMITTEE

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## ABBREVIATIONS

GIME = Global IME Bank Limited

EBL = Everest Bank Limited

NIMB = Nepal Investment Mega Bank Limited

SCBN = Standard Chartered Bank Nepal Limited

HBL = Himalayan Bank Limited

ROA = Return on Assets

ROE = Return on Equity

TAM = Technology Acceptance Model

SPSS = Statistical Package for the Social Sciences

ATM = Automated Teller Machine

CC = Credit Card

IB = Internet Banking

CV = Coefficient of Variation

SD = Standard Deviation

## ABSTRACT

This study aims to investigate the impact of digitalization on the financial performance of five selected commercial banks in Nepal: Global IME Bank Limited (GIME), Everest Bank Limited (EBL), Nepal Investment Mega Bank Limited (NIMB), Standard Chartered Bank Nepal Limited (SCBNL), and Himalayan Bank Limited (HBL) over a seven-year period from 2017 to 2023. The research relies on secondary data gathered from credible sources and applies various statistical tools and models to analyze the relationship between digital banking and financial outcomes. To assess this relationship, the study utilizes financial ratios, focusing specifically on Return on Equity (ROE) and Return on Assets (ROA), in order to determine whether the adoption of digital banking products has significantly influenced bank profitability. Quantitative methods, including correlation and regression analysis, are employed using SPSS version 23 to derive insights and interpret the data effectively. The topic of digitalization's impact on the performance of Nepalese commercial banks is of significant relevance to researchers, scholars, and investors alike. The findings reveal several notable patterns. Firstly, a negative relationship is identified between credit card usage and financial performance (ROA & ROE), suggesting that limited growth in credit card usage adversely affects bank profitability. Secondly, a positive correlation is found between the number of ATM cardholders and internet banking users, indicating that increases in these digital services contribute positively to financial performance. Overall, the study highlights that the growing adoption of digital banking products in Nepalese commercial banks plays a vital role in enhancing their financial performance and institutional growth.

## CHAPTER -I

### INTRODUCTION

#### 1.1 Background of the Study

A substantial departure from conventional analog methods is the outcome of the integration of digital technologies into many facets of society and the economy, a phenomenon known as "digitalization" (Hilbert, 2016). According to Westerman et al. (2014), it includes a broad variety of activities, such as the adoption of digital technology, the construction of digital infrastructure, and the development of creative digital business practices.

A wide term, "digitalization" refers to the digital transition of the economy and society from analog methods to digital technologies and digital business innovation. The use of digital technologies and data to generate income, enhance operations, and establish a digital culture is known as digitalization. By using digital technologies and digitalized data to automate or improve manual operations, it lowers the cost of paper while increasing productivity and efficiency.

Digitalization involves the use of digital technologies and data to drive revenue growth, enhance business performance, and foster a digital culture within organizations (Westerman et al., 2014). This often involves automating or improving manual processes through the use of digital technologies and digitalized data, which can increase efficiency and productivity while reducing costs associated with paper-based workflows (Chen et al., 2020).

Overall, digitalization has the potential to create significant value for organizations across a range of industries and sectors, by enabling them to better leverage digital technologies and data in order to achieve their goals (Westerman et al., 2014). However, it also poses significant challenges, such as the need to develop new skills and capabilities, manage organizational change, and ensure the security and privacy of digital data (Chen et al., 2020).

Nepal has undergone a significant shift toward digital banking, with a growing number of people using mobile phones to access banking services. According to recent data from Nepal Rastra Bank, more than nine million individuals in the country are actively using mobile banking. Mobile banking apps now support the majority of banking transactions, making them an essential part of everyday financial activity. Digital banking has enabled banks to better understand the changing preferences and behaviors of their customers. This insight has helped in developing more targeted, relevant, and informed digital marketing strategies. In general, digital banking encompasses all types of electronic banking services. This transition has been driven by the rapid advancements in information technology.

For users of electronic banking, reliability is a crucial factor. Their decision to adopt online banking is influenced by their level of internet self-efficacy, which includes their internet skills (Lichtenstein, 2006). A user-friendly and easily navigable interface increases the chances of building customer loyalty. However, if users are unable to complete their intended transactions efficiently, they may choose not to return to the financial institution's digital platform. According to Weaven (2007), the navigability of a banking website depends on its ease of use, overall usefulness, and how much time it helps customers save during their interaction.

Digital banking involves the delivery of banking products and services through electronic channels and is considered a key component of electronic finance. It enables both traditional and modern banking services to be offered in a fast, automated, and efficient manner using electronic communication technologies. A critical factor in enhancing service quality in the banking sector is the platform that customers use to access their accounts, carry out transactions, and retrieve financial information. Digitization refers specifically to the provision of low-value and retail banking services through digital means. These services include accepting deposits, issuing loans, managing customer accounts, offering financial advice, handling electronic bill payments, and delivering a variety of digital payment solutions such as electronic money. According to S.H. Manzoor (2011), electronic banking has undergone a significant transformation and rebranding, with more banks now offering their services through online platforms.

Research has explored the possible link between consumer demographics and the evolution of digitization, revealing that demographic factors are just as influential as psychological ones in determining the adoption of digital banking. Digital banking utilizes the internet as a platform to perform a variety of financial tasks, such as transferring funds, paying bills, checking account balances, making mortgage payments, and purchasing financial products like certificates of deposit (Mohammed, 2009). Also referred to as electronic funds transfer (EFT), digital banking is based on the principle of moving money electronically from one account to another, eliminating the need for physical cash or paper checks.

Digital banking allows customers to withdraw cash or pay bills using debit or credit cards at ATMs at any time of the day. It broadly includes all forms of electronic service delivery. The three primary categories of digital banking are automated teller machines (ATMs), mobile banking, and online banking. To enhance security, mobile and online banking platforms send alerts to notify customers immediately of any account activity. These alerts, such as notifications for completed credit or debit transactions, are sent via SMS or email. Additionally, customers can receive daily account balance updates. Laxmi Bank was the first to introduce mobile banking in Nepal, launching an SMS-based service in 2004. Since then, the use of digital banking has steadily increased across the country. Currently, around 10 million people in Nepal are registered for mobile banking services. Although digital banking is still not as widespread in Nepal as it is in many other Asian nations, its adoption is growing rapidly. Most Nepalese banks now offer mobile banking to their customers, and several Class A commercial banks have over 100,000 app downloads a number that continues to rise.

The internet is no longer limited to communication and information sharing; it now serves as a platform for shopping and conducting commercial transactions. As Hadadi (2012) pointed out, the internet has transformed consumer behavior, with customers now expecting more personalized products and services at lower costs. Traditional brick-and-mortar banks are increasingly facing profitability challenges due to heightened competition from digital-only banks. Despite this shift, only a few banks have successfully developed strategies to fully capitalize on the opportunities offered by the internet. As e-commerce continues to grow, banks are being compelled to adopt

digital banking models to stay competitive in a globalized market. Online purchases typically require digital payments through credit cards or bank transfers, eliminating the need for physical cash. Technologies such as digital wallets have simplified online shopping, allowing users to make faster and more convenient payments via web platforms or smartphones. The adoption of new technologies has significantly transformed the banking system, making long waits in queues a thing of the past. The introduction of mobile-based e-wallets in Nepal has provided a secure, efficient, and convenient method of conducting financial transactions. This advancement has been particularly welcomed by younger users, who prefer to send and receive money through their mobile devices. Technology has become a major force driving business transformation, enabling data-driven operations, innovative products and services, and new market opportunities. Although online banking services are cost-effective for banks and widely offered, their success ultimately depends on the willingness of customers especially bank account holders to adopt them (Chandio, 2011).

## **1.2 Problem Statement**

In Nepal, the majority of banks still rely on branch-based retail banking services. Due to the country's challenging geography, this model remains the most practical and widely used. However, digital banking is now expanding rapidly, transforming how financial services are delivered and how individuals manage their personal finances. Nepalese commercial banks are increasingly adopting digital banking solutions to streamline operations and reduce costs. Despite offering services like ATMs, internet banking, and mobile banking, many customers remain unaware of these options or are reluctant to use them. This highlights the need to understand customer perceptions and their intention to adopt digital banking. Such insights would help banks encourage the use of digital services, reduce reliance on cash transactions, and enhance service quality for customers. Although various online banking tools are available, customers are still hesitant to embrace them. Even when they possess ATM cards or have access to online banking, many are fearful or uncertain about using these technologies. As a result, a large portion of the population continues to favor traditional banking methods, such as using checkbooks and conducting in-person cash transactions.

As the world embraces digitization, Nepal is also advancing towards digital transformation. The government has introduced several initiatives and established laws to support the infrastructure needed for a seamless digital shift. Key laws such as the Telecom Policy 2004, IT Policy 2010, Broadband Policy 2010, Broadband Policy 2015, ICT Policy 2015, and the Cyber security Bylaw have been implemented to ensure an effective transition. Furthermore, the Digital Nepal Framework 2019 outlines a strategic plan for digital initiatives aimed at fostering economic growth, addressing societal challenges with fewer resources, and positioning Nepal for global opportunities. The framework focuses on eight sectors: digital foundation, agriculture, health, education, energy, tourism, finance, and urban infrastructure.

It is widely recognized that both individuals and businesses in Nepal are late adopters when it comes to adopting and implementing new technologies. This issue is not unique to Nepal, as many countries in Asia and the Middle East have faced similar challenges. Since Nepal joined the World Trade Organization (WTO) on April 23, 2004, services such as banking and government operations must be strengthened to meet international standards and maintain customer trust. To enhance service quality, adopting new technology and advancing technological capabilities is essential for banks as well. Compared to developed nations like those in Europe and the USA, Nepal lags behind in terms of access to modern technology and infrastructure. People in Nepal tend to be late adopters in nearly every aspect of technology and services. According to Hasan (2005), the general issues faced by developing countries are also relevant to Nepal, which include the following:

1. Are security and privacy the primary reasons for accepting new technology? Do many banks and financial institutions in underdeveloped and developing countries fail to adopt highly secure systems due to inadequate infrastructure for ensuring security and privacy?
2. Is a lack of computer literacy and internet access a significant barrier to adopting new technology? Does the low literacy rate in education make it harder for people to use the internet and computers effectively? Is training necessary to fully utilize these technologies? Does insufficient IT infrastructure make adopting new technology more difficult?

3. Does the absence of government policies and regulations hinder the banking sector from offering innovative banking services like internet banking?
4. Are internet connections unstable and slow in many areas? Does this mean that reliable internet services are not widely available, and are such services mostly confined to urban areas?
5. Are privacy concerns a significant issue for customers? Do fears about data security and network safety lead customers to lose trust in businesses?
6. Do customers hesitate to use internet banking because they fear that any errors or inaccuracies could result in financial loss?

### **1.3 Objectives of the Study**

The aim of this research is to identify and analyze the key factors influencing the rise and challenges of digitalization in Nepalese commercial banks:

1. To assess the trend of digitalization in the commercial banking sector.
2. To examine the relationship between digitalization and the financial performance of commercial banks.
3. To evaluate the impact of digitization on the financial performance of commercial banks.

### **1.4 Rationale of the Study**

Digitalization refers to the transition from traditional analog processes to digital ones within organizations. Companies adopt digitalization for three main reasons: to 'Gain Speed,' to 'Save Costs,' and to 'Expand Global Reach.' By enabling organizations to operate more efficiently, faster, and at lower costs, digitalization provides a competitive edge. It benefits organizations in the following ways:

1. Enhancing the efficiency, consistency, and quality of business processes globally.
2. Implementing a conventional digitized record system.
3. Improving accessibility and facilitating better information exchange across the world.
4. Breaking down geographical limitations by transforming processes from analog to digital.
5. Increasing response times and improving customer service on a global scale.

6. Lowering operational costs.
7. Leveraging data analytics for better decision-making.
8. Offering greater flexibility for staff.

### **1.5 Research Hypothesis**

The term "hypothesis" (plural: "hypotheses") refers to a specific, testable prediction regarding the expected outcomes of a study. It typically involves proposing a potential relationship between the independent and dependent variables (McLeod, 2021). Davis (1989) argued that "Prospective users may perceive a system as too complicated to use, and believe that the performance benefits of the application are outweighed by the effort required to use it, even if they recognize the application's value." Both of these beliefs are crucial and serve as fundamental factors influencing user behavior toward adopting digital banking.

H1: There is a significant positive relationship between internet banking and the financial performance of Nepalese commercial banks.

H2: There is a significant positive relationship between credit card usage and the financial performance of Nepalese commercial banks.

H3: There is a significant positive relationship between Automated Teller Machines (ATMs) and the financial performance of Nepalese commercial banks.

### **1.6 Limitation of the Study**

The research was conducted to optimize the ability to achieve the research objective, but there are some limitations that should be acknowledged, even though they do not invalidate the study:

1. While the study examines factors affecting digital banking, it is focused solely on the current scenario and the performance of banks through digitalization in Nepal.
2. The study is based on a limited dataset, and its findings cannot be fully generalized, as a more thorough study would provide stronger results.

3. The use of a convenience sample reduces the objectivity of the study, as it overlooks the perspectives of bank executives, whose input should be considered in future research.
4. Although the research addresses digital banking, including digital banking products, it is limited to bank customers who use internet banking, excluding mobile phone users.

The study concentrates on customers of digital banking services provided by commercial banks in Nepal. The criteria for selecting these commercial banks are detailed in the Research Methodology chapter.

## CHAPTER II

### LITERATURE REVIEW

A literature review is the process of discovering previously unexplored information on a research topic. To gather foundational insights on digitalization and its impact on the profitability of Nepalese commercial banks, various relevant sources have been examined. The review is divided into two sections: Theoretical Review and Research Review. The first section outlines the theoretical concepts related to various digital products and customer satisfaction, while the second section focuses on a review of relevant dissertations and related reports.

#### 2.1 Conceptual review

##### 2.1.1 Concept and Historical Background of Bank

"Digitization" and "digitalization" are two key concepts related to digital technology and the innovation process. However, the definitions of these terms are often implied rather than explicitly stated, and there is no clear agreement on how to conceptualize either of them. As a result, innovation management research has used these terms interchangeably to describe different phenomena.

The word bank derived from the Italian word 'banco' that signifies the exchange of money by sitting on the bench. In the olden days, European moneylenders or moneychangers used to display coins of different countries in big heaps (quantity) on benches or tables for the purpose of lending or exchanging. A bank is a financial institution, which deals with deposits and advances and other related services. It receives money from those who want to save in the form of Deposits and lend this money to those who need it. In other words, Bank can be understood as an authorized financial institution, which is established to accept deposits, pay interest, clear checks, make loans, act as intermediaries in financial transactions, and provides other banking services to its customers. Bank conducts the business activity, of accepting and safeguarding money owned by other individuals and entities, and then lending out this money in order to earn profit. Bank is an institution, which processes credit and lending operations, as well as accepting deposits and making advances. It also allows for the issuance of money and facilitates payment processing including automatic payment. It

facilitates all forms of electronic banking services internally and externally (Nyangosi, R., Arora, J.S., & Singh, S. 2009). Bank also can be defined in two aspects as:

1. Functional Aspects: According to functional aspect, a bank is an institute that keeps lends and exchange money.
2. Legal Aspect: According to legal aspect, a bank can be defined as a business, which accepts, deposits as a saving according to a different account and in turn advances loan as credit.

For instance, “Digitization” has been used to refer to a variety of different phenomena including, the creation of a digital product (Hopp et al., 2018; Rindfleisch et al., 2017) and the use of digital technology as part of the new product development process (Marion & Fixson, 2021). Likewise, “Digitalization” has been used to refer to processes of data collection, generation, and analysis to create value and enable innovation (Cappa et al., 2021; Goduscheit & Faullant, 2018); the pursuit of digital innovation, that is, the creation of novel digital products (Pesch et al., 2021) and the use of digital technology as part of the innovation process (Lanzolla et al., 2021).

Kegan et al. (2005), in their research on internet banking, investigated how online banking applications affect the performance of community banks in the United States. The research employed a structural equation model to establish an online banking index and an econometric model to assess bank performance. A study involving ten community banks was carried out. After the pilot study was deemed acceptable, all community banks with total assets under one billion United States dollars located in Iowa, Minnesota, Montana, North Dakota, and South Dakota were identified. The structural equation model was employed to assess the different variables identified to determine if the index accounts for variations in community bank performance. The findings showed that banks offering comprehensive online banking services generally outperform those that fall short. Moreover, online banking enables community banks to enhance their earning potential, as indicated by return on equity, and to better their asset quality. Since the research took place in a technologically advanced economy, it aimed to determine how counterparts in developing countries, such as Kenya, perform.

Aduda and Kingoo (2012) examined the connection between digitization and the performance of banks in Kenya. The research utilized secondary data obtained from the annual reports of the selected banks, employing both descriptive and inferential statistics for data analysis. The research indicated that a positive correlation exists between digitization and bank performance, as digitization has made services more accessible to bank customers, thereby enhancing the performance of the banking industry. Given that the research focused on commercial banks primarily located in urban regions, it would be crucial to expand the study to include microfinance institutions, as contemporary innovations target marginalized areas and clientele overlooked by commercial banks. This research examined whether banking services provided by commercial banks can be implemented and function effectively for other financial entities such as DTMs.

Muriuki (2009) identified the factors that affect the adoption of digitization by MFIs in Kenya. The objective of the study was to assess the factors that affect the adoption of digitization by MFIs in Kenya; and to rank the importance of such factors. A descriptive research design was adopted and data collected using a questionnaire administered to each respondent. Among the factors were organizational factors, perceived technological factors, perceived external factors. Results indicate that MFIs with a strong support and commitment to digitization from top management are more likely to adopt it. MFIs that have requisite IT and business resource (Infrastructure and skills) for digitization adoption stands a better chance at adopting digitization. MFIs are not exempt from technological advancement especially for fast service delivery and therefore to remain relevant and reap the benefits that come with technology including improved financial performance.

Al-Smadi and Al-Wabel (2011) carried out a study to examine the impact of ebanking on Jordanian banks performance for the period 2000 – 2010. Accounting data was used to measure banks performance using regression analysis. The results showed that digitization has a significant negative impact on the banks performance since banks in Jordan depend on traditional channels to carry out their banking operations; hence the costs associated with its adoption are higher than the incremental revenues. The study was conducted in a society where confidence of digitization is low unlike the Kenyan market where the population has embraced technology. It was therefore important to

investigate whether many of the innovations in digitization adopted in Kenyan microfinance industry has an effect on their performance.

Ombati et al. (2010), tried to establish the relationship between technology and Service quality in the banking industry in Kenya. The research was carried through a cross-sectional survey design which questioned respondents on digitization services. The population of the study mainly constituted customers of banks within the central business district of Nairobi with a sample size of 120. Data was analyzed by use of frequency, percentage, means and correlation analysis. The findings revealed that there is a direct relationship between technology and service quality which can translate to performance of the bank. The different dimensions of offering banking services electronically such as security, efficiency, accurate records, convenience and accurate transactions are critical in adoption of internet banking hence need to measure the effect of adoption of digitization on the financial performance.

Karimzadeh et al. (2014) examined how digitization affects the profitability of a bank in Iran. Utilizing quarterly data from 2004 to 2012, they discovered that the growth of digitization has a significant positive correlation with the profitability, assessed through ROA, of the selected bank. Utilizing data from a sample of 10 banks during the timeframe of 2002 to 2012.

Rauf and Qiang (2014) assessed the effect of digitization on the effectiveness of Pakistani commercial banks, with performance evaluated based on Return on Assets, Return on Equity, and interest margin. Their empirical study showed that digitization positively affects margin, ROA, and ROE for recent adopters, while early adopters experience significant positive effects on ROE and Margin. They conclude that banks can view digitization as an effective cost-saving strategy to compete against both domestic and foreign banks, provided there is proper monitoring and control over the associated risks.

Mishra (2023), Green banking refers to performing banking transactions and bill payments without using paper or via online services, providing many advantages. By adopting green banking, people can purchase, interact, and manage their financial tasks in an eco-friendly way. This method not only optimizes financial workflows but also reduces paper waste, aiding both those handling documentation and the broader

environment. The research revealed that Nepal's commercial banks are progressively adopting green banking methods to enhance environmental sustainability. The three main elements affecting the implementation of green banking in Nepal are stakeholder expectations, ecological concern, and brand reputation. Significantly, brand image appeared as the most powerful element in promoting the adoption of green banking practices among the nation's commercial banks. Eco-friendly banking is essential in lowering carbon emissions.

### **2.1.2 IT and the Banking Sector**

IT revolution in the banking industry will help to cope with the explosive growth in the number of transactions and to provide improved customer service. In the process, decision-making in banks would get immensely facilitated. We have been witnessing since about the early eighties the phenomenon of widespread use of computers and communication technology in most of the industrialized and emerging market economies. This has resulted in faster funds movement across nations and borders. Globalization of economies and financial liberalization within the economic has opened new opportunities of growth for techno-savvy institutions, while for the others these have resulted in shrinkage of revenues. The use of IT in the banking industry in our country has however been somewhat limited and has as a result, restricted our presence in international operations. Even in critical spheres such as those involving funds transfer, and MIS based decision-making, there has been little evidence of proactive movement towards wholesale computerization (Gupta,S.,& Yadav, A.2019). In Nepal, we have such a large reservoir of human capital trained and skilled in Information Technology, and we are aware of the fact that a number of countries have developed their financial sector through an extensive use of IT as the medium of growth. It is only with the growing recognition of the need for having in place financial reforms, has the interest in IT application in the banking sector in Nepal increased. Perhaps the Globalization has in a way contributed to the growing technology adaptations in the banks. The sharp growth of computer use in new consumer goods of durable nature has also given rise to the need for use of computers in the service sectors as well banking industry, as a service provider cannot naturally lag behind in this movement toward the new techno-age.

### **2.1.3 Information and Communication Technology (ICT) in Nepal**

Our modern life today is hard to imagine without information and communication technology as it has changed our daily life dramatically. Innovations and developments in the information and communication technology have made our world like a small village. The revolution of IT and effects of globalization process are getting more apparent even in our country. After the introduction of first computer in 1972 and sound development in telecommunication sector, Nepal also has experienced a lot of cyber activities and IT is showing that Nepal is also gradually moving towards the online world with growing number of ISPs which reached 36 till this year, around 1,000,000 internet users and visitors in CAN InfoTech reached around 400,000 last year. There were hundreds of institutions and colleges providing education related to IT and in school level also computer education has been incorporated in the basic curriculum. All these statistics indicates that IT is growing in Nepal and more people are getting used to with the technology (Wikipedia, Information technology).

### **2.1.4 Computerization in Banks**

With the changing technological environment, banks in future cannot survive without the support of Information Technology is merely stating the obvious. The point to ponder over is whether the industry is now poised for the challenges that arises as result. From all indications; banks seem to be prepared to exploit the opportunities that globalization and financial liberalization provides. Computerization of branch operations, controlling offices and Head offices has been going to get very popular in the modern banking practice sharply. In recent times, since that is the only way by which senior managements in banks can gain information on the size of operations on a daily basis. The banking industry is clearly cognizant of the imperatives of financial liberalization and has therefore attempted to computerize branches that are located in commercial important centers across the country. The large functional and geographical spread of banks has led to sharp growth in the number of accounts and in the area as of operation of banks. This has necessitated switchover from hard cash to paper based instruments. This has been facilitated to extend the Internet Technology to coming year. Computerization of service branch operations serves as vital fulcrum point for all clearing of drawn on it, are routed through the service branch, where the relevant accounting entries are passed for inter branch reconciliation. Banks have had to

therefore computerize the operations of nearly 90 percent of the service branches (Pradhan, 2009). The development and use of communication networks has also helped the banking industry to gain in terms of improved banking services. Other important developments in the payments area have a bearing on the speed of computerization in banks. Electronic payment products such as Electronic Clearing Service (Credit and Debit) are becoming increasingly popular with corporate. Nepalese commercial Bank responding to the needs of business entities has been offering different computerized products. Any Branch Banking System is available in most of the commercial banks of Nepal. The number of corporate institutions availing the ABBS service has been increased. The scopes of widening its coverage further seems be very substantial.

### **2.1.5 E-Commerce**

In the twenty-first century, we can collaborate from our rooms with people around the globe as long as we keep ahead of the curve and have abilities that are marketable everywhere. With more open and barrier-free trade and commerce, economic integration has already started. Globalization is underway, and information and communication technology has reduced the world to the size of a tiny hamlet. The huge network of information and communication technologies is creating a virtual world that is replacing traditional social interaction processes, media, trading processes, and systems. E-commerce is a new phenomenon that has evolved as a new medium of trade and commercial behavior.

E-commerce is simply a value-enhancing process of purchasing and vending products and services through electronic means, particularly utilizing the Internet. The realm of ecommerce is expansive, with a significant percentage of global sales expected to be processed electronically this year, according to Forester Research Inc., and Nepal 17 must seize this chance rather than let it pass. Nonetheless, the progress of e-commerce relies on e-readiness. E-readiness denotes a nation's capability to harness the Internet as a catalyst for economic progress and human advancement. It also considers the extent to which a common e-business practice exists in each nation and is prepared to automate its conventional business activities via the Internet. Nonetheless, in the case of Nepal, the majority of Internet enterprises are limited to the Kathmandu valley. Nepal's status in information communication and technology (ICT) is reflected in its tele density, which is approximately 7.77 percent based on statistics and data from Nepal Telecom

(Yadav, 2004). Still, the current slow business climate, negative socio-cultural conditions, and low e-literacy levels in the country have not significantly enhanced its e-readiness. The prominent practice of e-business has grown, and many ICT companies have been registered by commercial entities with the launch of the .np domain name. The latest trends in e-business are the new practices of 'e-gifting' and 'e-remittance.' These methods of business to consumer via e-commerce demonstrate increasing ease for consumers. Nonetheless, the size of the e-market remains quite restricted. The thriving banking sector each year anticipates the introduction of e-banking to deliver quick services. Even with these interests, the primary limitation for a fully developed e-commerce operation is the absence of robust cyber-laws and other necessary regulations (Wikipedia, Electronic commerce). Nepal's first cyber law was recently enacted. The legislation is a significant milestone of its type and paves the way for broader ecommerce initiatives to launch officially in the near future. The extent to which the act aligns with the "Model Law on e-commerce" established by the "UN commission on International Trade Law" will influence future e-commerce development, as we aim to navigate international e-markets smoothly. For e-commerce to positively impact the nation's economy, all laws governing e-commerce activities must adhere to international monetary regulations through the internet. The impact of this will be evident when handling digital signatures related to cryptography, as we must do our research before diving into ecommerce. E-commerce and e-readiness enhance one another in shaping the evolution of a nation's e-economy. Although Nepal's e-readiness is rated very low at 0-9 according to ITC, the eagerness and readiness to utilize ICT as a means to explore business comprehensively will represent a crucial advancement in the modernization of economic reforms within the nation. The current challenges involve finding the best ways to enhance the inadequate, yet hopeful e-readiness of the country towards a thriving e-commerce market down the line. With so-called Information Technology (IT) revolution in the globe, Nepal is also witnessing a myriad of cyber activities both at private and government levels. Nepal entered in the cyber world in the late 70s. Private sector and joint ventures took a lead role to the development of IT. The government formulated IT policy eight years ago, putting forth its various agenda to develop IT and manipulate the latest IT discoveries for the overall development endeavors. However, the government has not introduced the supporting act and regulations essential to boost e-commerce and e-governance. After a repeated

call by the IT entrepreneurs, professionals and planners to introduce the Cyber Act, the government finally decided to introduce Electronic Transactions Digital Signature Act-2063, also known as Cyber Law.

### 2.1.6 Need of digitalization in Nepalese Banking sectors:



Figure 2.1: Need of digitalization

#### 1. Customer Centricity

The concept of customer centricity is not new. More than 50 years ago Drucker (1954) wrote in his book, *The Practice of Management*, that “it is the customer who determines what a business is, what it produces, and whether it will prosper.” Levitt (1960) proposed that firms should not focus on selling products but rather on fulfilling customer needs. Still, the importance of customer centricity has only recently been embraced by the business community.

According to a 2003 Gartner Group Report, “By 2007, fewer than 20 percent of marketing organizations among Global 1000 enterprises will have evolved enough to successfully leverage customer-centric, value-added processes and capabilities.” The same report said that “by 2007, marketers that devote at least 50 percent of their time to advanced, customer-centric marketing processes and capabilities will achieve marketing ROI that is at least 30 percent greater than that of their peers, who lack such emphasis” (Marcus and Collins 2003). Thus, it would seem important to understand how a firm can successfully transform itself and thus reap the potential payoffs.

## 2. Unique Value Proposition

Osterwalder et al. (2014) indicates value Proposition Design helps you tackle the core challenge of every business creating compelling products and services customers want to buy. This highly practical book, paired with its online companion, will teach you the processes and tools you need to create products that sell. Using the same stunning visual format as the authors' global bestseller, *Business Model Generation*, this sequel explains how to use the "Value Proposition Canvas" to design, test, create, and manage products and services customers actually want.

Value Proposition Design is for anyone who has been frustrated by new product meetings based on hunches and intuitions; it's for anyone who has watched an expensive new product launch fail in the market. The book will help you understand the patterns of great value propositions, get closer to customers, and avoid wasting time with ideas that won't work. You'll learn the simple process of designing and testing value propositions that perfectly match customers' needs and desires.

## 3. Data Analytics

Zhang (2018) shows organizations can leverage data analytics to do everything, from learning more about their customers and improving existing processes, to building predictive models and forecasting growth opportunities. Data analytics is a relatively broad term, one that encompasses many different forms of analysis, such as customer analytics, business analytics, predictive analytics, and so on. To that end, banking analytics simply refers to any application of data analytics in banking.

Data analytics has been integral to the way banks and other financial institutions do business for some time now; in fact, the financial services industry as a whole was one of the earliest adopters of analytics, having used it to monitor and anticipate sudden changes in the market. Nowadays, banks need to leverage banking analytics to derive granular insights from massive quantities of data

known as Big Data and apply those strategic findings across all levels of business.

#### 4. Organizational Development

Burke (2017) highlights that organizational development is essential for the success of digitalization. Executives aiming to create a digitalization strategy framework must fully understand the challenges involved. A common issue is that many executives seek quick solutions, leading to poorly planned strategies for adopting new technologies.

Managing digital business processes can be complex. Modern companies face challenges such as fragmentation, uncertainty, resource demands, and external dependencies. The first step is to make organizations more agile not as a passing trend, but as a core, ingrained value. You may also be interested in our article on the elastic digital workplace, which is often considered the workplace of the future. However, it's crucial to develop an organizational change management strategy that aligns with your digital strategy.

#### 5. Digital Transformation Management

Hebert (2019) in his study on Digital Transformation: Organizational transformation is all about execution emphasizes that successful digital transformation requires strong leadership and dedication. The process involves several key steps, including:

- I. Creating a digitalization strategy framework
- II. Managing change effectively
- III. Fostering learning and development
- IV. Promoting digital advocacy
- V. Managing digital transformation projects

## **2.2 Theoretical Review**

The review that involves a critical evaluation of current theories and models pertinent to a research subject, exploring their evolution, implementation, advantages, shortcomings and interrelations, ultimately creating a theoretical basis for study by determining which theories are most appropriate and applicable to your research inquiry. It serves as the foundation for understanding how existing theoretical frameworks contribute to the field and how they might be applied or extended in future studies.

### **Technology Acceptance Model**

The absence of validated measurement scales to predict users' adoption of information technologies prompted the development of the Technology Acceptance Model (TAM) as a solution. According to Fred (1989), research in this area has been hindered by the lack of high-quality metrics for key determinants of user acceptance, and past studies show that many existing metrics do not correlate strongly with actual system usage. Figure 1 illustrates the TAM, which outlines the informal relationships between system design features, perceived utility, perceived ease of use, attitude toward use, and actual usage behavior (Davis, 1993). The TAM model identifies two primary factors influencing when and how individuals will adopt new information systems: perceived utility (PU) and perceived ease of use (PEOU) (Chandio, 2011). The adoption of recommendation technology by users is influenced by several factors related to their experience with the system, including the positive aspects of their interaction and the likelihood of using a web application regularly. As Armenta notes, "People will use an application if they believe it will help them perform a task more effectively than without it. However, even if users find an application useful, if it is difficult to use, the perceived benefits of using it are outweighed by the effort required." TAM has been recognized as an effective tool for teaching and learning (Kazi, 2013). One of TAM's strengths is its utilitarian, technology-focused approach, which may overlook the influence of social and psychological factors on technology adoption. A common criticism of TAM is its failure to consider individual differences, such as prior experience, age, gender, and other psychological factors that can shape attitudes toward technology and affect user's intention to adopt it (Prasad, 1999).

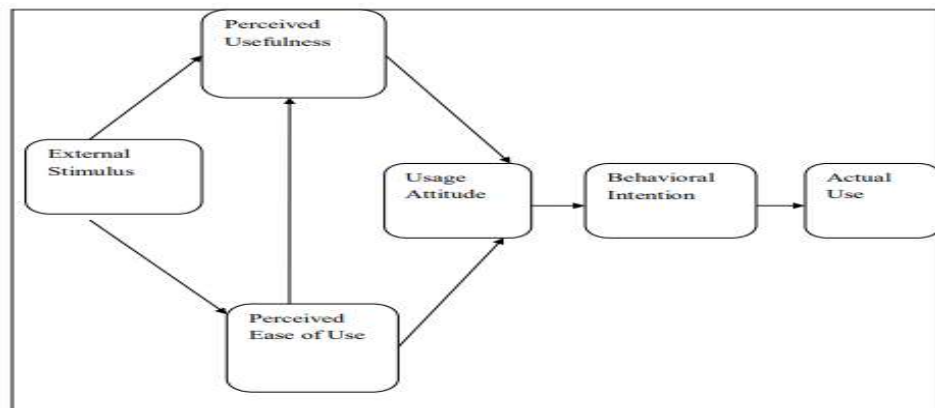


Figure 1: Technology Acceptance Model  
(Source: Adapted from (Davis, 1993).

Figure 2.2: Technology Acceptance Model

### **Technology Organization Environment (TOE) Framework**

The Technology-Organization-Environment (TOE) Framework, developed by Tornatzky and Fleischer in 1990, is widely used to examine the factors that influence the adoption of innovations, including digital technologies. It indicates that the choices of organizations to embrace digital technologies are shaped by three primary contexts: the technological context (the presence and traits of digital tools), the organizational context (resources, culture, and structure), and the environmental context (external pressures such as market competition or regulatory demands). The TOE framework is especially helpful for grasping how organizations adjust to digital transformation due to internal and external influences, thus making it very pertinent for examining digitalization across different sectors (Tornatzky & Fleischer, 1990).

### **Digital Transformation Model (DTM)**

Digital transformation involves incorporating digital technologies across every aspect of an organization, fundamentally altering its operations and the value it provides to customers. The Digital Transformation Model (DTM) highlights essential aspects for organizations to evolve into the digital era. These elements consist of digital leadership, integration of technology, cultural transformation, reengineering of business processes, and improvement of customer experience (Westerman, Calm ejane, Ferraris, & Bonnet, 2014). The framework highlights the importance of aligning technology, individuals,

and organizational objectives strategically. It also emphasizes the importance of leadership in spearheading digital transformation and making certain that the organization is prepared to handle the related changes in culture and processes.

### **Unified Theory of Acceptance and Use of Technology 2 (UTAUT2)**

The UTAUT2 model, introduced by Venkatesh et al. (2012), extends the original UTAUT framework by adding factors such as hedonic motivation, price value, and habit, providing a more comprehensive explanation of consumer adoption of technology in digital settings. Although UTAUT mainly concentrates on the adoption of technology within organizations, UTAUT2 is better equipped for analyzing the uptake of digital consumer technologies such as mobile apps, e-commerce sites, and social networks. Incorporating hedonic motivation (enjoyment gained from technology use) and price value (cost-benefit evaluation) renders UTAUT2 especially pertinent for examining consumer involvement in digitalization, especially regarding digital services and platforms (Venkatesh et al., 2012).

## **2.3 Empirical Review**

Empirical review refers to a category of literature review that concentrates on evaluating and summarizing research studies that have gathered and examined data, which implies they depend on actual evidence. This section consists of review on International and Nation journals and articles.

### **2.3.1 Empirical review on International Journal**

Kotler (2012) explored the concept of strategic marketing and emphasizes the importance of understanding customer needs and creating value through effective marketing strategies. He argues that successful marketing goes beyond simply promoting products or services; it requires businesses to deeply understand their target market, anticipate consumer behavior, and align their offerings with consumer expectations. Kotler also highlights the significance of segmentation, targeting, and positioning in the marketing process, which allows companies to focus on specific customer segments and differentiate their products in the marketplace. According to Kotler, companies must build strong relationships with their customers by consistently delivering value and ensuring customer satisfaction. He also emphasizes the growing role of digital technologies in marketing, noting how they have transformed the way

businesses interact with consumers, creating new opportunities and challenges in the process. Overall, Kotler's findings underline the need for businesses to adapt to a dynamic and competitive market by using comprehensive marketing strategies that prioritize customer-centric approaches and innovation.

Kegan et al. (2005) explored the application of structural equation modeling (SEM) to analyze the financial performance of commercial banks, specifically examining the relationship between various financial variables and Return on Equity (ROE). The study utilized SEM to assess how different factors, such as capital structure, asset quality, and management efficiency, influence the financial outcomes of banks. They conducted a survey across ten commercial banks, gathering data on these variables to understand their collective impact on ROE. Their findings suggest that key elements like effective management and optimal capital allocation play a significant role in enhancing a bank's profitability and, consequently, its ROE. Kegan et al. also emphasized the importance of understanding the complex interrelationships among financial variables, as SEM allows for a more nuanced analysis of how these factors interact to affect overall financial performance. The study concluded that ROE is not solely dependent on individual financial factors but rather emerges from the interplay of multiple elements within a bank's structure and operations.

Onay et al. (2008) examined the effect of internet banking on bank profitability by analyzing data from thirteen banks in Turkey that adopted online banking between 1996 and 2005. Using both specific and macroeconomic control variables, they assessed the impact of internet banking on Return on Assets (ROA) and Return on Equity (ROE). Their findings revealed that internet banking began to positively affect banks' ROE after a two-year delay, while a negative impact was observed with a one-year lag. The study concluded that the internet has transformed the competitive landscape of the retail banking sector and has provided emerging countries with opportunities to strengthen their financial intermediation infrastructure. They also noted that investment in e-banking is a gradual process, but the introduction of internet banking has positively influenced the performance of Turkey's banking system.

Malhotra and Singh (2009) examined the impact of internet banking on the performance and risk profiles of banks. They find that the adoption of internet banking significantly

enhances the operational efficiency of banks, leading to improved financial performance. By enabling faster and more convenient transactions, internet banking helps banks reduce their operational costs, streamline services, and attract a larger customer base, thereby increasing profitability. However, the study also highlights the risks associated with the digital transformation, particularly in terms of cyber security threats and the need for robust technology infrastructure. While internet banking offers advantages such as better accessibility and customer service, Malhotra and Singh emphasize that it also exposes banks to new challenges, including fraud and data breaches, which can affect their overall risk exposure. Their findings suggest that while the benefits of internet banking in terms of performance are clear, banks must carefully manage the accompanying risks to ensure long-term sustainability and security in their operations.

Muiruri (2009) highlighted that e-banking channels significantly influence the financial performance of banks. The study found that banks leverage internet banking to enhance accuracy and efficiency, as well as to boost the speed and reliability of the banking system. This is mainly because the process is automated, reducing the likelihood of human errors.

Gikandi and Bloor (2010) explored the adaptation and effectiveness of e-banking in the context of the evolving financial landscape. They argue that the success of electronic banking (e-banking) largely depends on how well banks adapt to technological advancements and meet the changing demands of customers. According to their findings, e-banking has proven to be an effective tool for improving customer service, increasing convenience, and reducing operational costs. However, Gikandi and Bloor also highlight that the effectiveness of e-banking is influenced by factors such as user acceptance, technology infrastructure, and the regulatory environment. Banks that invest in user-friendly platforms, ensure robust security measures, and adapt their services to local market needs tend to perform better in e-banking. Thus, Gikandi and Bloor conclude that the long-term effectiveness of e-banking hinges on the bank's ability to continuously adapt to technological trends and customer preferences.

Table 2.1

*Summary of Empirical review (International Journal)*

Source	Summary of Empirical Review	
	Methodology	Finding
Kegan et al. (2005)	Structural equation model, survey of ten community bank and ROE survey of ten community banks and ROE	Internet banking and performance of community banks examined the impact of online banking application on community bank performance.
Onay (2008)	ROA, ROE	Impact of internet banking on bank profitability
Malhotra and Singh (2009)	Multiple regression analysis	Impact of internet banking on bank performance and risk.
Muriuki (2009)	Questionnaire administered to each respondent	Factor that affects the adoption of ebanking.
Gikand and Bloor (2010)	Survey	Adoption and effectiveness of ebanking.
Ombati et al. (2010)	Frequency, percentage, means and correlation analysis	Relationship between technology and service quality in the banking industry.
Al-Smadi and Al-Wabel (2011)	Regression analysis	Examine the impact of e-banking on banks.
Aduda and Kingoo (2012)	Descriptive and inferential statistics	Relationship between e-banking and performance of banking system
Kotler (2012)	Regression analysis	Increased customer loyalty, improved customer access, attracting new customers, offering of more services are the primary drivers of online banking
Okiro and Ndungu (2013)	Survey	Impact of mobile banking and internet banking on financial performance of financial institutions
Karimzadeh et al. (2014)	ROA	Impact of e-banking on the profitability of a bank.
Rauf and Qiang (2014)	ROA, ROE and interest margin	Impact of e-banking on the performance of commercial banks.
Mishra, P. (2023)	Survey	Commercial banks in Nepal are increasingly embracing green banking practices to promote environmental sustainability.

**2.3.2 Empirical Review on National Study**

Wagle (2023) investigated how banking activities influence the financial performance of selected commercial banks in Nepal, analyzing the empirical relationship between

core banking factors and financial outcomes. The study focused on aspects such as credit management, liquidity management, capital adequacy, and asset quality, and their impact on key profitability and efficiency metrics, namely Return on Assets (ROA) and Return on Equity (ROE). The research offered valuable empirical insights into the banking elements that shape financial performance in Nepal's commercial banking sector. It emphasized the critical role of effective credit and liquidity practices, maintaining strong asset quality, ensuring sufficient capital reserves, and the increasing significance of digital banking. The results aligned with findings from global banking research and contributed meaningfully to the understanding of bank performance within the Nepalese context.

Upadhaya (2021) conducted a study titled E-Banking in the Banking System of Nepal, which provided an in-depth examination of the development, adoption, and impact of electronic banking (e-banking) services in Nepalese commercial banks. The research focused on how e-banking services such as internet banking, mobile banking, and ATM services were transforming the banking landscape in Nepal and assessed their role in improving service delivery, customer satisfaction, and financial inclusion. The study offered valuable empirical insights into the adoption and impact of e-banking in Nepalese commercial banks.

Malla (2014) conducted a study titled E-Banking Services and Its Impact on Customers, which explored the relationship between e-banking services and customer satisfaction within the context of Nepalese banks. The research focused on how various e-banking services such as internet banking, mobile banking, and ATM services affected customer behavior, convenience, and satisfaction, which were crucial for assessing the overall effectiveness and adoption of these services in the banking sector. The study provided an important empirical contribution to the understanding of e-banking services and their impact on customer satisfaction in Nepal. The research highlighted the importance of convenience, security, and customer support in influencing the adoption and usage of e-banking services. It also showed that e-banking positively impacted customer satisfaction and loyalty, suggesting that banks in Nepal could enhance their competitive advantage by improving these services.

Shrestha (2012) carried out a study titled Determinants of Financial Performance of Nepalese Commercial Banks, which offered valuable insights into the primary factors influencing the financial outcomes of commercial banks in Nepal. The research aimed to assess the impact of both internal and external variables on bank performance. Internal, bank-specific factors included liquidity, capital adequacy, and asset quality, while external macroeconomic indicators encompassed inflation and GDP growth. Return on Assets (ROA) and Return on Equity (ROE) were used as standard measures to evaluate profitability and operational efficiency. The study highlighted several crucial internal factors such as capital adequacy, effective liquidity management, asset quality, and loan-to-deposit ratio as well as macroeconomic elements like inflation and economic growth, as key drivers of profitability. The findings demonstrated that enhancing these factors could lead to significant improvements in the financial performance of Nepalese commercial banks.

Table 2.2

*Summary of Empirical review (National Journal)*

<b>Summary of Empirical Review</b>		
<b>Source</b>	<b>Methodology</b>	<b>Finding</b>
Shrestha (2012)	Panel data	Determinants of Financial Performance of Nepalese Commercial Banks
Malla (2014)	Multiple regression analysis	E-banking services and it's impact on customer
Upadhyay (2021)	Descriptive research designs	E-Banking in banking system of Nepal
Wagle (2023)	Regression analysis	Digital products and its impact of digital products application on commercial bank performance.

## **2.4 Research Gap**

The research gap refers to the discrepancies or limitations identified in previous studies by various authors, and the proposed study aims to address and fill these gaps. In the literature review, several authors have shared their perspectives on the relationship between digitalization and performance in the Nepalese commercial banking sector. Kotler (2012) discusses the concept of strategic marketing, highlighting the importance of understanding customer needs and creating value through effective marketing

strategies. Kegan et al. (2005) apply structural equation modeling (SEM) to analyze the financial performance of commercial banks, focusing on the relationship between various financial variables and Return on Equity (ROE). Malhotra and Singh (2009) examine the impact of internet banking on banks' performance and risk profiles, finding that the adoption of internet banking significantly improves operational efficiency and financial performance. Gikandi and Bloor (2010) investigate the adaptation and effectiveness of e-banking within the changing financial landscape, suggesting that the success of electronic banking depends on how well banks embrace technological advancements and meet the evolving needs of customers.

Commercial banks, under pressure from globalization and competition from non-banking entities, are seeking new strategies to enhance the value of their services. Understanding the factors that drive performance is essential for identifying and replicating exceptional success. In Nepal, although banks have made efforts to introduce e-banking services, the country still faces several challenges that need to be addressed in order to improve banking performance. However, the challenges surrounding e-banking have not received adequate attention from scholars. This research aims to fill this gap and contribute to the existing literature on digitalization in Nepal. There is a notable lack of understanding about how digital products impact the financial performance of Nepali banks, and many individuals are unaware of the convenience these banks offer through their digital services. This study seeks to explore and examine the history and progress made over time, while also bridging the knowledge gap for both bank account holders and academics in Nepal. Additionally, it offers recommendations for improving digital banking services in the country.

## CHAPTER III

### RESEARCH METHODOLOGY

This chapter outlines the methods and procedures used throughout the research. The main objective of the study is to assess the impact of digitalization on the financial performance of selected commercial banks. Therefore, the research method chosen aligns with the requirements of the study.

#### 3.1 Research Methodology

A research design serves as a framework or outline for conducting an investigation to gather and analyze data. It guides the researcher correctly to accomplish the objective.

This research is descriptive and analytical. Descriptive research is fundamentally a fact-gathering method that focuses mainly on the present and abstracts generalizations through cross-sectional analysis of the existing scenario, while analytical research design pertains to identifying problems and discovering solutions. The study can likewise be viewed as a developmental method since it employs a strategy to identify the solution.

This research will utilize a descriptive and analytical design approach. This study outlines the status of digital system usage and its influence on the financial performance of banks. Correlation multiple linear regression models evaluate whether financial performance (profitability) depends on the variables specified in the specific objectives.

#### 3.2 Population and Sample

The study focuses on all 20 "A" class commercial banks in Nepal as the population for analyzing the impact of digitalization on the performance of Nepalese commercial banks. Out of these 20 banks, five have been selected as sample banks Global IME Bank Limited, Everest Bank Limited, Nepal Investment Mega Bank, Standard Chartered Bank Nepal, and Himalayan Bank Limited. Data for the study has been collected over a seven-year period, from 2017 to 2023.

#### 3.3 Sources of the Data

This study relies on secondary data. For the research, secondary data is utilized to gather the necessary information as per the study's requirements. Relevant financial and

operational data for the sampled banks is collected from their annual reports and websites. All the data is sourced from secondary references.

### **A. Primary Source**

Primary data is gathered from direct sources, including opinion surveys conducted through questionnaires, field visits, and information provided by the respondents.

#### **Types of Primary Sources**

##### **Historical Documents**

Written records from the past that provide important insights into the events, customs, and societies of the past are known as historical documents. Letters, treaties, manuscripts, diaries, legal codes, speeches, maps, and official records are only a few examples of the various types of these papers. They provide firsthand recollections that aid in the reconstruction and comprehension of the intricacies of human history, making them primary sources for historians. Such records serve as an essential link between the past and present by enabling us to track the development of concepts, organizations, and civilizations.

##### **Artifacts**

Artifacts are physical reminders of historical and cultural evolution that were made, altered, or utilized by people in the past. Items such as tools, pottery, jewelry, weaponry, clothing, sculptures, and common household items are all included in this broad category. Artifacts from museums, archaeological sites, or private collections offer priceless insights into the beliefs, way of life, and technological innovations of past civilizations. They provide information that written documents alone cannot, making them crucial to comprehending human history. Additionally, artifacts are essential to identification and cultural preservation. They are frequently on exhibit in museums, where they serve as educational and cultural icons for upcoming generations.

##### **Audio and Visual Materials**

Audio and visual resources are vibrant types of historical and cultural documentation that depict events, experiences, and expressions via sound and visuals. These resources

consist of audio recordings, images, films, videos, radio transmissions, and digital content. In contrast to written texts or tangible items, audio and visual materials provide a direct, engaging encounter with history, enabling contemporary audiences to listen to voices, experience events, and notice cultural subtleties as they were originally perceived. Their distinct capability to express emotions, ambiance, and motion renders them essential tools for grasping history and culture.

### **Statistical Data**

Statistical information pertains to numerical data that is gathered, structured, and examined to illustrate patterns, trends, or features of a specific phenomenon or group. This information is essential in multiple domains such as history, economics, sociology, and science, as it offers unbiased perspectives on social, political, and economic structures. Statistical information can vary from census data and commercial statistics to crime statistics and public health data, each providing a distinct viewpoint on the composition and evolution of societies throughout history.

Essentially, statistical information is an important instrument for comprehending and influencing the world. It connects personal experiences with broader phenomena, offering a quantitative basis for research, narrative creation, and decision-making. By meticulously analyzing and interpreting these figures, we acquire richer understanding of the dynamics that influence societies, economies, and the environment. Original data sets from experiments or surveys.

### **Interviews and Surveys**

Interviews and surveys are essential tools for gathering information and understanding human experiences, opinions, and behaviors. These methods are widely used in disciplines like sociology, anthropology, history, market research, and journalism. While both are structured ways of collecting data, interviews involve direct, often conversational engagement between an interviewer and a respondent, while surveys typically involve a set of standardized questions distributed to a larger group of people. Together, they provide rich qualitative and quantitative insights into various topics. Firsthand accounts or responses from individuals.

### **Literary Works**

Literary pieces are crafted writings that cover a wide array of imaginative expressions, such as novels, poetry, dramas, essays, and short narratives. These creations are frequently viewed as artistic accomplishments, showcasing the cultural, social, and philosophical concepts of their era. By employing creative language and narratives, literary pieces examine the human experience, tackling themes like love, identity, ethics, authority, and struggle. They offer readers enjoyment alongside deep understanding of life's complexities.

### **Original Research**

Original research denotes the organized examination and analysis performed to produce new understanding, perspectives, or remedies in a specific discipline. In contrast to reviews or secondary analyses, original research relies on primary data that researchers gather and examine to tackle a distinct question, issue, or hypothesis. This kind of research is essential for the growth of knowledge, as it expands the limits of comprehension and investigates unknown areas. It is typically linked to scholarly, scientific, and professional domains, serving as the foundation for advancements and informed decision-making based on evidence.

#### **b. Secondary Source**

Secondary data are collected from secondary sources. The secondary sources of data are the information received from books, journal and article concerned with the study, banks annual reports and their websites.

#### **Types of Secondary Sources**

##### **Books**

Original research denotes the organized examination and analysis performed to produce new understanding, perspectives, or remedies in a specific discipline. In contrast to reviews or secondary analyses, original research relies on primary data that researchers gather and examine to tackle a distinct question, issue, or hypothesis. This kind of research is essential for the growth of knowledge, as it expands the limits of comprehension and investigates unknown areas. It is typically linked to scholarly,

scientific, and professional domains, serving as the foundation for advancements and informed decision-making based on evidence.

### **Journal Articles**

Journal articles are academic publications that showcase original research, reviews, or theoretical debates within a particular academic or professional discipline. Usually found in academic journals, these articles are crucial for spreading knowledge, acting as a channel through which researchers and professionals present discoveries, evaluate current work, and aid in the progress of their fields. Journal articles are distinguished by their emphasis, organization, and commitment to strict criteria of evidence and peer evaluation.

### **Encyclopedias and Dictionaries**

Encyclopedias and dictionaries are crucial reference materials that offer systematic and credible information across a variety of subjects. They act as essential instruments for education, research, and general understanding, providing instant access to trustworthy information and clarifications. Although both seek to educate, encyclopedias and dictionaries vary in their scope and objectives, as encyclopedias provide in-depth, contextual entries on topics, whereas dictionaries concentrate on word definitions, pronunciations, and usage.

### **Documentaries and Films**

Documentaries and films are impactful forms of storytelling that utilize visual and audio components to communicate narratives, feelings, and concepts. Although both are types of cinema, documentaries and films vary greatly in their approach, objectives, and style. Documentaries seek to inform, educate, or raise awareness regarding actual events, issues, or people, while films (usually called feature films or narratives) are mainly created for entertainment, although they can also delve into intricate themes and human experiences. Media that interpret and present historical or contemporary events.

### **Reports and Reviews**

Reports and reviews are essential types of written communication that offer analysis and information; however, they have distinct purposes and are organized differently. Although reports are generally utilized to present in-depth results regarding a particular subject or occurrence, reviews provide an assessment or critique, usually concentrating on the quality or efficacy of an entity, like a product, service, book, or performance. Analyses or evaluations produced by institutions, think tanks, or research organizations.

### **Critical Essays**

A critical essay represents a type of scholarly writing that provides an in-depth analysis, interpretation, and assessment of a specific topic, usually involving a piece of literature, artwork, or a particular argument or theory. The aim of a critical essay goes beyond simply summarizing the material; it seeks to interact profoundly with it, providing insights and showcasing a careful analysis of its components. Critical essays frequently investigate themes, structure, style, character evolution, and hidden meanings in a text or artistic work, relying on both the author's aims and the reader's understanding. Scholarly interpretations and evaluations of literature, art, or historical events.

### **3.4 Data Analysis Techniques**

Appropriate tools and methods are used to obtain the most relevant results based on the research objectives. The goal of the study is to evaluate whether e-banking has significantly improved the profitability of banks in Nepal, particularly in terms of their return on equity (ROE) and return on assets (ROA). This research uses a combination of various analytical tools, applying different quantitative statistical techniques to extract key insights from the data and interpret them effectively.

Through the collection of secondary data, Return on equity and Return on assets for the pertinent years have been calculated:

#### **3.4.1 Correlation Analysis**

It is a statistical method used to measure the strength of the linear relationship between two variables. Karl Pearson's correlation coefficient, denoted as  $r(x, y)$ , measures the relationship between two variable series,  $x$  and  $y$ . The value of  $r$  can be calculated as follows:

$$r = \frac{n\sum xy - \sum x \cdot \sum y}{\sqrt{n\sum x^2 - (\sum x)^2} \sqrt{n\sum y^2 - (\sum y)^2}}$$

Where, r = correlation coefficient

n = no. of years

$\sum x$  = Sum of series X

$\sum y$  = Sum of series Y

$\sum XY$  = Sum of the product X and Y variables

$(\sum x)^2$  = Sum of squares of series X

$(\sum y)^2$  = Sum of squares of series Y

The coefficient of correlation ranges from +1 to -1. When the coefficient (r) equals +1, it indicates a perfect positive correlation between the variables, while r = -1 signifies a perfect negative correlation. If r = 0, it means there is no relationship between the variables. The coefficient of correlation not only indicates the strength of the correlation but also its direction. The closer the value of 'r' is to +1 or -1, the stronger the relationship between the variables, while the closer 'r' is to 0, the weaker the relationship (Chaudhary & Sharma, 2071).

### 3.4.2 Multiple Regression Analysis

Regression is a mathematical method used to measure the average relationship between two or more variables, expressed in the original units of the data. It involves estimating or predicting an unknown variable based on known variables. The unknown variable is referred to as the dependent variable, while the known variables are called independent variables. The primary goal of multiple regression is to predict the value of the dependent variable (such as profitability) using the known values of multiple independent variables (like ATM, credit cards, and internet banking).

### **Regression equation of Y (Profitability) on ATM, CC and IB**

#### **Model 1**

This model is designed to examine the relationship between the selected independent variables and Return on Assets (ROA):

$$\text{ROA} = a + b_1 \text{ATM} + b_2 \text{CC} + b_3 \text{IB} + \dots e_i \text{ Eqn. 1}$$

#### **Model 2**

This model assesses the relationship between the same independent variables and Return on Equity (ROE);

$$\text{ROE} = a + b_1 \text{ATM} + b_2 \text{CC} + b_3 \text{IB} + \dots e_i \text{ Eqn. 2}$$

Where,

a = Constant

b<sub>1</sub>-b<sub>3</sub> = Intercept of independent variables

ATM = Automated Teller Machine

CC = Credit cards

IB = Internet Banking

e<sub>i</sub> = error term

### **3.5 Research Framework and definition of variables**

In simpler terms, a research framework provides the structure that supports the theory of a research study. It outlines the theoretical basis for the research and explains the reasons behind the research problems being investigated. This section includes the development of ideas related to the research topic and the selection of relevant theories, concepts, and variables that support the study. Additionally, research hypotheses are formulated, focusing on both the dependent and independent variables that influence the research study. Overall, the research framework sets the foundation for the study by establishing its theoretical underpinnings and guiding the research process. The theoretical framework for these variables is represented through the following diagram,

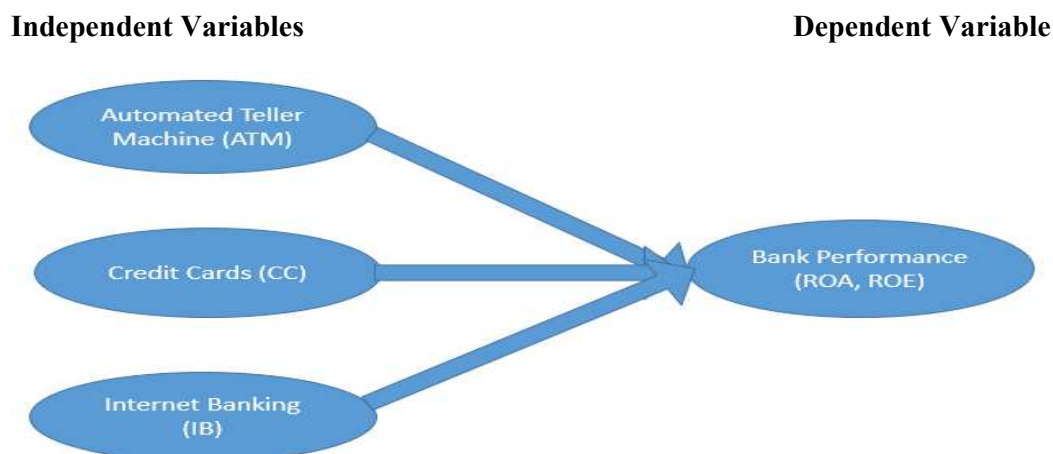


Figure 3.1: Research Framework

Source: Dinh et al (2015).

### 3.5.1. Independent Variables

#### 1. Automated Teller Machine (ATM)

An Automated Teller Machine (ATM) is primarily used for cash withdrawals, but it also facilitates bill payments. In Nepal, Himalayan Bank Limited was the first to introduce ATMs in 1995. Since then, the number of ATMs has steadily increased, reaching a total of 2,791 by mid-September 2018. The introduction of Smart Choice Technologies (SCT) in 2001 led to the creation of a unified shared ATM network, enabling interoperability among different machines and the adoption of multiple standards. Furthermore, the VISA network enables customers to use their bank cards at ATMs operated by other financial institutions. Expanding ATM networks provides banks with a competitive edge, especially when they offer greater convenience and accessibility for customers. Providing free or affordable ATM access serves as a key advantage for drawing in and keeping customers. Banks investing in cutting edge ATM technologies, including biometric verification, contactless payments, or multi-purpose ATMs, can position themselves as innovative and technologically superior, drawing in tech-minded customers. ATMs can greatly enhance banks' financial performance by lowering operational expenses, boosting transaction volumes, creating new revenue sources, and improving customer satisfaction. By expanding their reach, improving cash management, and utilizing data-driven insights, ATMs enhance bank operations

while also offering strategic benefits that promote sustainable profitability and market expansion.

## **2. Credit card**

A credit card is an electronic banking tool that provides users with convenience and flexibility in managing transactions. It enables individuals to rent cars, reserve accommodations, plan travel, make purchases, and pay bills anywhere the card is accepted, without the need for cash or checks. Cardholders can spend at any time and place, provided they remain within the credit limit set by their bank. Unlike debit cards, credit cards require repayment after use. When a transaction is made, the electronic banking provider receives payment from the user's bank. This system helps improve the bank's operational efficiency. Credit cards greatly influence the financial results of banks by broadening revenue sources, creating steady earnings from interest and fees, and fostering customer loyalty and interaction. The profitability of credit cards is influenced by elements like interest rates, yearly fees, merchant charges, and transaction volume. Nonetheless, effectively managing credit risk is crucial for guaranteeing that the advantages of credit card products surpass possible losses. Through diligent management and tactical marketing, credit cards can transform into a very lucrative offering for banks.

## **3. Internet Banking**

Customers who use this service for internet banking can perform banking transactions from various devices, such as PCs, laptops, and mobile phones. Customers might have the ability to track their account details, transfer funds between accounts, and settle bills based on the services provided by the bank. Customers can also reach out to the bank to request specific banking services. In 2002, Kumari Bank Limited introduced the country's first internet banking service, a feature that is now provided by most commercial banks. Online banking significantly affects the financial results of banks by enhancing efficiency, lowering expenses, broadening market access, and raising transaction volume. By providing a user-friendly, safe, and readily available platform, banks can improve customer satisfaction, create new revenue sources, and retain a competitive advantage in the marketplace. Additionally, the capacity to gather and assess data from online transactions enables banks to make more informed choices, enhance risk management, and promote long-term profitability

### **3.5.2. Dependent Variables**

#### **1. Return on Assets (ROA)**

Return on assets, or ROA, is a metric that assesses a company's profitability in comparison to its total assets. It offers an understanding of how effectively management utilizes its resources to generate profits. It evaluates the bank management's ability to generate profit by utilizing the corporate resources available to them. A greater ROA signifies that the company is utilizing its resources more efficiently. A company's capability to produce a return on all its assets is measured by its return on assets (ROA). Generally, ROA is displayed as a percentage. The calculation is obtained by dividing the annual net income by the company's total assets.

#### **2. Return on Equity (ROE)**

Return on Equity (ROE) measures the rate of return on the capital invested by the company's shareholders. It is a key indicator of how effectively a company is generating profit from the money it has borrowed and the equity invested. ROE is calculated by dividing net income after taxes by total equity capital. It reflects a company's ability to generate earnings relative to its shareholder equity, which is reported on the balance sheet. Investors typically look for high ROE as it signals efficient use of capital. Companies that can generate funds internally tend to have higher ROE. In essence, a higher ROE indicates that the company is effectively using its shareholders' capital to generate profits. Thus, a higher ROE suggests that the bank's management is effectively allocating shareholder funds.

## CHAPTER –IV

### RESULTS AND DISCUSSIONS

#### INTRODUCTION

This chapter provides a systematic overview and analysis of data to explore various factors affecting the financial performance (profitability) of commercial banks in Nepal. It also presents the results derived from data analysis using the SPSS model and the methodologies described in Chapter Three, Research Methodology

#### 4.1 Results

Analysis of secondary data has been analyzed by using the transaction amount and volume, trend of fluctuation on Nepalese market etc.

##### 4.1.1 Trend forecasting of Digital products

Table 4.1

*Trend of ATM-Cash Withdrawal Transaction and Amount*

Fiscal Year	No. of Transaction	% change in Transaction	Transaction Amount	% Change in Transaction Amount
2019/20	6,302,846		54,763	
2020/21	74,479,681	1082%	648,268	1084%
2021/22	100,988,504	36%	839,732	30%
2022/23	132,930,979	32%	1,049,780	25%
Forecast 2023/24	180,273,808	36%	1,442,265	37%

Source: Annual report of Nepal Rastra Bank (NRB)

Figure 4.1

*Trend forecasting of ATM-Cash Withdrawal Transaction*

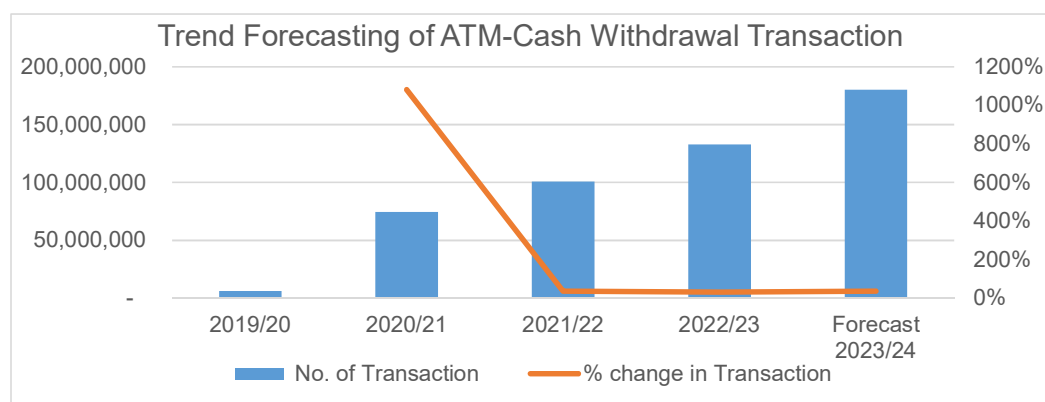
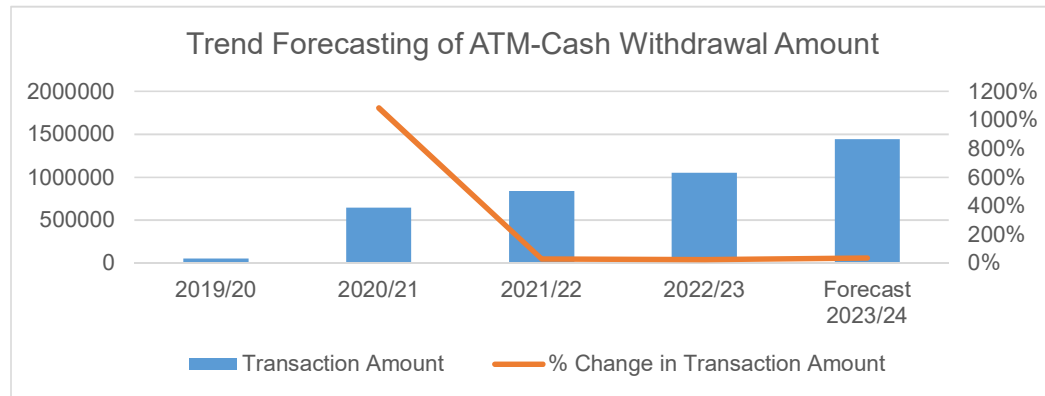


Figure 4.1: ATM cash withdrawal transaction trend

Figure 4.2

*Trend forecasting of ATM-Cash Withdrawal Amount**Figure 4.2: ATM cash withdrawal Amount trend*

The data presented showcases the performance of transactions and transaction amounts over several fiscal years, illustrating significant growth and providing insights into trends and projections.

In the fiscal year 2019/20, the number of transactions was 6,302,846, with a transaction amount totaling 54,763. This serves as the baseline year, and there was no percentage change provided for comparison. However, the following year saw a massive surge. In 2020/21, the number of transactions skyrocketed to 74,479,681, representing an astonishing increase of 1,082%. This dramatic growth was matched by the transaction amount, which grew by 1,084%, reaching 648,268. The sharp increase in both the number of transactions and the transaction amount suggests significant changes in the business or market environment, such as new product offerings, broader market adoption, or a shift in consumer behavior, likely catalyzed by external factors such as the global pandemic or digital transformation.

Moving into 2021/22, both the number of transactions and the transaction amount continued to rise, though at a more moderate pace. The number of transactions grew by 36% to reach 100,988,504, while the transaction amount increased by 30%, amounting to 839,732. Although the growth rates slowed, the figures still indicate healthy expansion, suggesting that the rapid surge from the previous year had stabilized, and the business was entering a phase of sustained growth.

In 2022/23, the trend continued with the number of transactions increasing by 32% to 132,930,979 and the transaction amount growing by 25% to 1,049,780. This demonstrates consistent growth, albeit at a slightly slower rate than the prior year, which is typical as businesses mature and reach larger market saturation levels.

The forecast for 2023/24 shows that the upward trajectory is expected to persist, with a predicted 36% increase in the number of transactions, totaling 180,273,808, and a 37% rise in the transaction amount, reaching 1,442,265. This forecast indicates that while the pace of growth may have slowed from the initial explosive increase in 2020/21, the business still anticipates continued and significant growth in both transaction volume and value.

In summary, the data highlights an exceptional period of growth in both the number of transactions and the transaction amounts, particularly between 2019/20 and 2020/21. While the growth rates have moderated in subsequent years, the trend remains positive, with projections for 2023/24 indicating further growth, though at a more stable and predictable rate.

Table 4.2

*Trend Forecasting of Credit Cards Transaction and Amount*

Fiscal Year	No. of Transaction	% change in Transaction	Transaction Amount	% Change in Transaction Amount
2019/20	119,610		584	
2020/21	1,717,397	1336%	9,986	1610%
2021/22	2,270,929	32%	14,143	42%
2022/23	3,153,798	39%	20,156	43%
Forecast 2023/24	4,229,458	34%	26,936	34%

*Source: Annual report of Nepal Rastra Bank (NRB)*

Figure 4.3

*Trend Forecasting of Credit Cards Transaction*

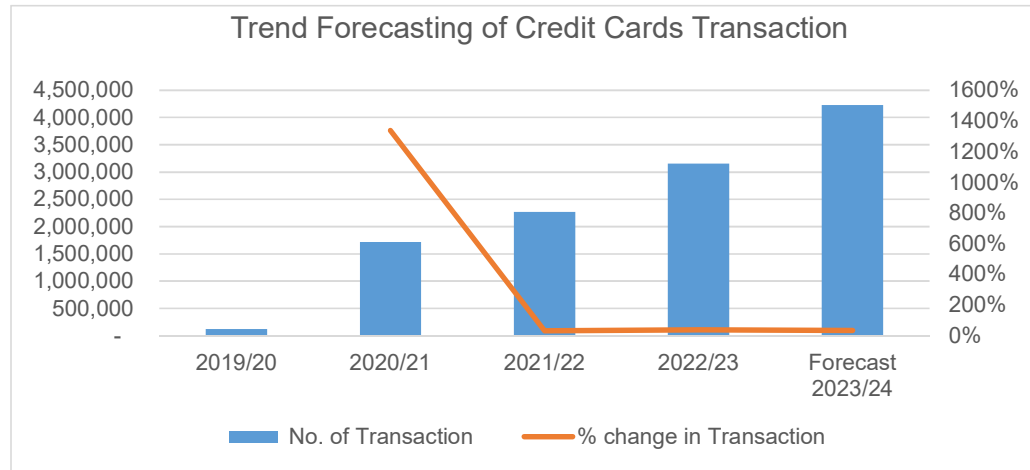


Figure 4.3: Credit Card withdrawal transaction trend

Figure 4.4

*Trend Forecasting of Credit Cards Amount*

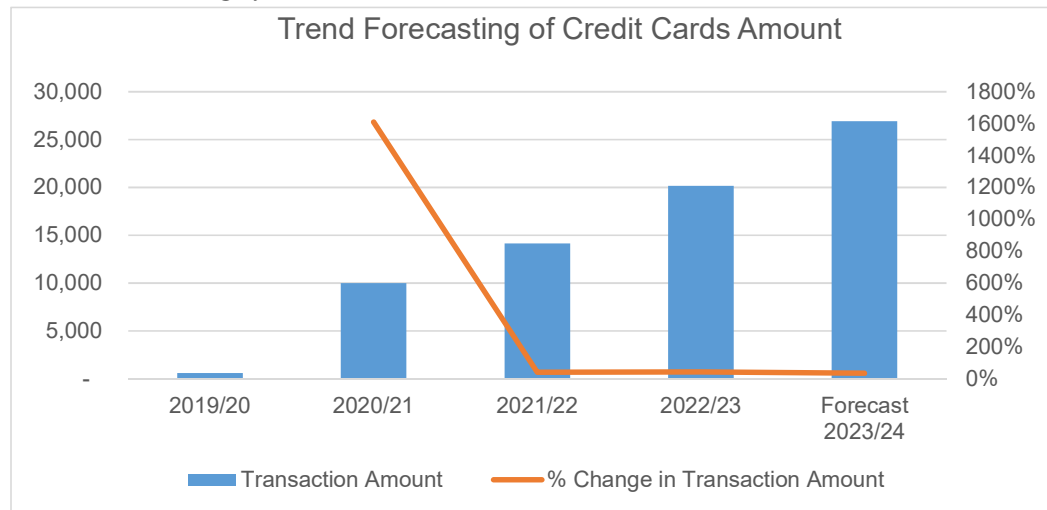


Figure 4.4: Credit Card Withdrawal Amount Trend

The data provided reflects a clear and substantial growth in both the number of transactions and the transaction amounts over the course of several fiscal years, with a consistent upward trend in both metrics.

In 2019/20, the number of transactions was relatively low, totaling just 119,610, with the transaction amount being 584. This year serves as the baseline, providing a point of reference for the significant growth that would follow in the subsequent years.

The year 2020/21 witnessed an extraordinary surge. The number of transactions jumped to 1,717,397, marking an increase of 1,336%. Similarly, the transaction amount skyrocketed by 1,610%, reaching 9,986. This dramatic growth could be attributed to several factors, such as a shift in consumer behavior, market expansion, or the implementation of new services or products. Such explosive growth is often seen during periods of digital transformation or sudden market disruptions, possibly triggered by global events like the COVID-19 pandemic.

In 2021/22, while the growth rate slowed down, it was still significant. The number of transactions increased by 32%, reaching 2,270,929, and the transaction amount grew by 42%, totaling 14,143. Although these rates were lower than the previous year's explosive growth, the figures still represent healthy and sustained expansion, indicating the business was continuing to gain momentum and capture a larger market share.

The upward trend continued in 2022/23, with the number of transactions growing by 39% to 3,153,798 and the transaction amount rising by 43%, reaching 20,156. This indicates that the business continued to scale effectively, likely benefiting from ongoing market penetration, improved customer engagement, or product diversification. The fact that the percentage increase in both the number of transactions and the transaction amounts remained strong further suggests a well-executed growth strategy.

Looking ahead, the forecast for 2023/24 predicts continued growth, with the number of transactions expected to rise by 34%, reaching a total of 4,229,458, and the transaction amount projected to increase by 34% as well, totaling 26,936. While the growth rate is expected to moderate compared to the earlier years, the forecast still indicates healthy and sustainable growth, suggesting that the business is approaching a more stable and mature phase of expansion.

In summary, the data reveals a story of rapid growth in both transaction volume and value, particularly between 2019/20 and 2020/21, followed by sustained but slightly moderated growth in the subsequent years. The forecast for 2023/24 indicates that while the pace of growth may slow somewhat, the business is poised for continued success, with further increases in both the number of transactions and transaction amounts expected

Table 4.3

*Trend Forecasting of Internet Banking Transaction and Amount*

Fiscal Year	No. of Transaction	% change in Transaction	Transaction Amount	% Change in Transaction Amount
2019/20	653,459		19,048	
2020/21	3,179,362	387%	98,656	418%
2021/22	3,355,888	6%	159,489	62%
2022/23	3,540,542	6%	171,474	8%
Forecast 2023/24	4,891,757	38%	241,695	41%

Source: Annual report of Nepal Rastra Bank (NRB)

Figure 4.5

*Trend Forecasting of Internet Banking Transaction*

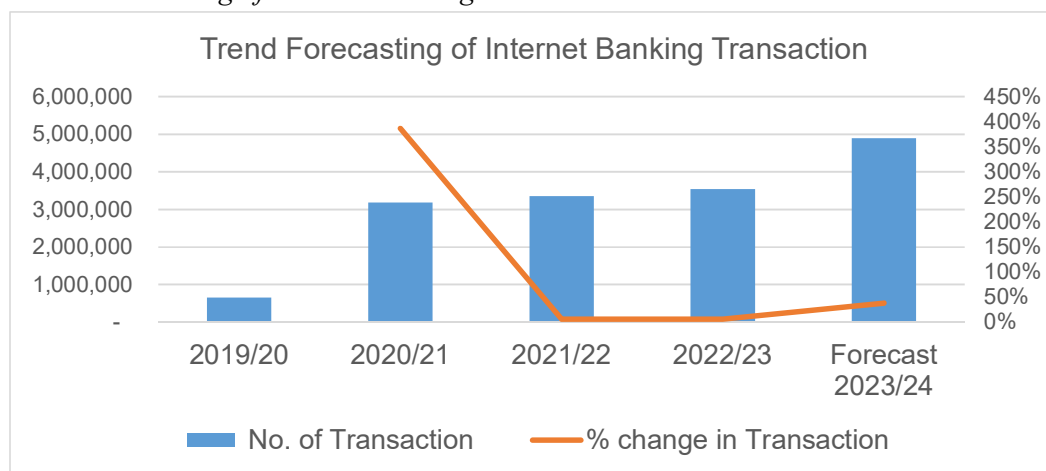


Figure 4.5: Internet Banking Transaction Trend

Figure 4.6

*Trend Forecasting of Internet Banking Amount*

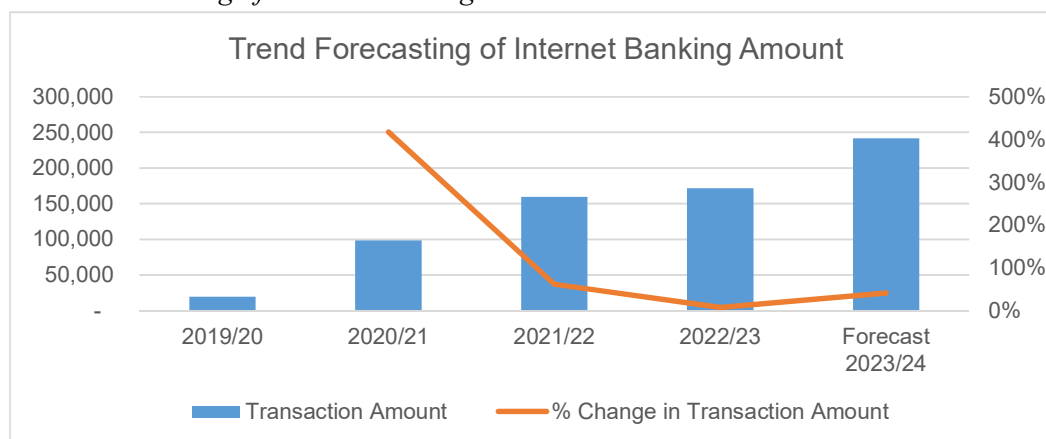


Figure 4.6: Internet Banking Amount trend

The provided data illustrates the growth trends in both the number of transactions and transaction amounts across multiple fiscal years, showcasing significant fluctuations and patterns in both metrics.

In the 2019/20 fiscal year, the number of transactions stood at 653,459, and the transaction amount was 19,048. This year serves as the baseline for comparison, with no percentage change provided. It marks the starting point for the growth that would follow in subsequent years.

The 2020/21 fiscal year saw a dramatic increase in both key metrics. The number of transactions surged to 3,179,362, reflecting a substantial growth of 387%. Similarly, the transaction amount rose by 418%, reaching 98,656. This sharp rise indicates a period of significant expansion, likely driven by factors such as an increased demand for services or products, market expansions, or possibly even a shift to digital platforms, which is common in times of economic disruption or change.

In 2021/22, the growth rate began to slow but remained positive. The number of transactions grew by 6%, reaching 3,355,888, and the transaction amount rose by 62%, totaling 159,489. The slowing growth in transaction volume could suggest that the explosive expansion from the previous year had stabilized, but the increase in transaction value suggests that the business may have been focusing on higher-value transactions or more premium offerings.

The 2022/23 fiscal year saw a continuation of this moderate growth. The number of transactions increased by 6% again, reaching 3,540,542, while the transaction amount grew by 8%, amounting to 171,474. The slower growth in transaction amounts compared to the previous year (8% vs. 62%) could indicate that the business was reaching a saturation point in terms of volume, though the continued increase in value suggests improvements in customer spending or more lucrative deals being made.

Looking forward, the forecast for 2023/24 predicts a sharp rebound, with the number of transactions expected to grow by 38%, reaching 4,891,757. The transaction amount is also forecasted to rise by 41%, totaling 241,695. This substantial expected growth indicates that the business is anticipating a period of acceleration, possibly due to

strategic initiatives, new market opportunities, or product innovations that could significantly drive up both the transaction volume and transaction value.

In summary, the data shows an initial explosive growth period between 2019/20 and 2020/21, followed by a phase of more stable, albeit still positive, growth in transaction volume and value in the following years. The forecast for 2023/24 suggests a recovery and strong expansion, with expectations for both metrics to experience significant increases once again.

#### 4.1.2 Examining the Relationship of Digitalization with Financial Performance Indicators

Table 4.4

*Number of Digital Products Users of Global IME Bank Limited*

Year	ATM	CC	IB
2017	57,462	160,000	73,520
2018	113,032	181,233	83,456
2019	287,604	195,210	93,456
2020	447,451	200,000	102,345
2021	481,580	210,300	124,566
2022	5,499,843	220,000	133,457
2023	9,372,847	234,556	140,334

The data presented above shows a steady increase in the use of digital banking services, including ATM, credit card, and internet banking. In 2017 and 2018, the number of ATM users was 57,462 and 113,032, respectively. By 2019, this number grew to 287,604, and by 2023, it reached 9,372,847 users. Similarly, credit card users increased from 160,000 in 2017 to 181,233 in 2018, with a further rise to 195,210 in 2019, and reaching 234,556 by 2023. Internet banking users also saw growth, from 73,520 in 2017 to 83,456 in 2018, and reaching 140,334 by 2023. These results highlight the growing significance of digital banking services at Global IME Bank Limited.

Table 4.5

*Number of Digital Products Users of Everest Bank Limited*

Year	ATM	CC	IB
2017	103,431	180,000	78,310
2018	196,501	185,100	88,231
2019	237,079	193,100	95,320
2020	238,128	200,000	105,431
2021	269,061	204,335	115,430

2022	3,244,945	210,000	130,210
2023	4,137,333	215,000	166,567

The data presented above shows a consistent growth in the use of digital banking services, including ATM, credit card, and internet banking. In 2017 and 2018, the number of ATM users was 103,431 and 196,501, respectively. By 2019, this number grew to 237,079, and by 2023, it had reached 4,137,333 users. Similarly, the number of credit card users increased from 180,000 in 2017 to 185,100 in 2018, with a further rise to 193,100 in 2019, and reaching 215,000 by 2023. Internet banking users also saw growth, from 78,310 in 2017 to 88,231 in 2018, and reaching 166,567 in 2023. These results demonstrate Everest Bank Limited's success in expanding its digital services and underscore the importance of these services in attracting more customers in today's digitalized banking environment.

Table 4.6

*Number of Digital Products Users of Nepal Investment Mega Bank Limited*

Year	ATM	CC	IB
2017	35,626	164,450	68,996
2018	60,863	177,780	78,667
2019	227,363	188,432	97,668
2020	240,049	215,334	134,566
2021	253,463	225,678	156,778
2022	2,745,722	245,798	168,910
2023	7,202,024	265,778	187,678

The data presented above shows a steady growth in the adoption of digital banking services, including ATM, credit card, and internet banking. In 2017 and 2018, the number of ATM users was 35,626 and 60,863, respectively. By 2019, this number increased to 227,363, and by 2023, it had reached a significant 7,202,024 users. Similarly, credit card users grew from 164,450 in 2017 to 177,780 in 2018, reaching 188,432 in 2019, and expanding to 265,778 users by 2023. Internet banking users also saw an increase, from 68,996 in 2017 to 78,667 in 2018, and reaching 187,678 users in 2023. These results reflect the achievements of Nepal Investment Bank Limited in expanding its digital services, highlighting the growing importance of digital banking in today's globalized financial landscape.

Table 4.7

*Number of Digital Products Users of Standard Chartered Bank Nepal*

Year	ATM	CC	IB
2017	25,283	150,000	55,678
2018	39,996	155,366	77,887
2019	48,582	163,366	93,467
2020	48,010	168,250	105,678
2021	48,743	170,000	110,345
2022	561,625	178,678	125,434
2023	689,556	188,456	145,788

The data presented above indicates a steady increase in the adoption of digital banking services, including ATM, credit card, and internet banking. In 2017 and 2018, the number of ATM users was 25,283 and 39,996, respectively. By 2019, the number of ATM users grew to 48,582, and by 2023, this figure had risen significantly to 689,556. Similarly, credit card users increased from 150,000 in 2017 to 155,366 in 2018, reaching 163,366 in 2019, and growing further to 188,456 users by 2023. Internet banking users also saw growth, with 55,678 in 2017, 77,887 in 2018, and 145,788 in 2023. These results highlight the importance of digital banking services and facilities at Standard Chartered Bank Limited, contributing to its continued growth and development.

Table 4.8

*Number of Digital Products Users of Himalayan Bank Limited*

Year	ATM	CC	IB
2017	106,879	174,330	78,943
2018	182,590	180,567	83,567
2019	237,079	193,333	97,879
2020	265,014	205,667	126,775
2021	280,759	243,310	156,798
2022	3,244,945	253,518	166,778
2023	6,742,321	278,988	178,665

The data presented above shows a steady growth in the adoption of digital banking services, including ATM, credit card, and internet banking. In 2017 and 2018, the number of ATM users was 106,879 and 182,590, respectively. By 2019, this number rose to 237,079, and by 2023, it had increased significantly to 6,742,321 users. Similarly, credit card services saw growth, with 174,330 users in 2017 and 180,567 in

2018. By 2019, the number of users reached 193,333, and by 2023, it grew to 278,988. Internet banking also experienced an upward trend, with 78,943 users in 2017, 83,567 in 2018, and 178,665 users by 2023. This data highlights the growing importance of digitization at Himalayan Bank Limited, enhancing convenience and accessibility of banking products and services, while attracting more customers through reliable digital banking options.

The adoption of digital payment methods is rising, driven by improvements in payment system infrastructure and policies that promote digital payments. The increase in digital transactions can be attributed to easier access and lower service charges

Table 4.9

*Return on Equity (ROE) of different Banks*

Year	Global IME Bank	Everest Bank	NIMB	Standard Chartered Bank Nepal	Himalayan Bank
2017	13.3	25.74	16.9	29.5	21.58
2018	13.37	20	19.5	24.12	14.17
2019	18.47	25	13	16.88	18.34
2020	12.88	10.53	8.92	13.24	15.4
2021	13.53	10.32	11	8.93	14.89
2022	13.93	20.68	11.2	13.13	10.76
2023	14.19	20.53	6.69	18.11	4.65

The Return on Equity (ROE) for five Nepali banks for a seven-year period, from 2017 to 2023, is displayed in the table above. A crucial financial indicator of a bank's profitability in relation to its shareholders' equity is return on equity (ROE), which shows how well the bank uses its equity capital to turn a profit.

Global IME Bank has exhibited a generally stable but slightly increasing trend in its ROE from 2017 to 2023. Beginning at 13.3% in 2017, the ROE increased somewhat annually until it reached 14.19% in 2023. Even if the growth has been relatively small, this steady rise indicates that the bank has been able to raise its profitability or better manage its equity over time.

The ROE of Nepal Investment Mega Bank (NIMB) was comparatively higher in 2017 (16.9%), but it rapidly declined in the following years, reaching 6.69% by 2023. The decrease is especially apparent starting in 2019. This implies that Nabil Bank might

have experienced a decline in returns to its shareholders as a result of growing difficulties with profitability or equity management.

Everest Bank shows some volatility in its ROE. It had a strong ROE of 25.74% in 2017, which decreased significantly to 10.53% in 2020. After that, it recovered somewhat, reaching 20.53% in 2023. This pattern indicates that while the bank performed very well initially, it faced challenges around 2020, possibly due to market or internal conditions. However, Everest Bank appears to have regained its profitability and efficiency in the following years.

The ROE trend for Standard Chartered Bank Nepal is erratic. In 2017, it began with a comparatively high ROE of 29.5%, which sharply declined in the years that followed. Profitability had significantly declined by 2021, as seen by the ROE of just 8.93%, which only marginally recovered to 18.11% in 2023. This drop and the partial recovery that followed could be the result of strategic adjustments made by the bank or larger economic factors that have an impact on its performance.

Himalayan Bank displayed a somewhat inconsistent performance, with a steady decline in ROE over the years. Starting at 21.58% in 2017, the bank's ROE decreased gradually to 4.65% by 2023, indicating a significant loss of profitability. The biggest drop occurred in 2023, which is notably low compared to its previous performance, signaling potential issues in operational efficiency, cost management, or market challenges affecting its bottom line.

Table 4.10

*Return on Assets (ROA) of different Banks*

Year	Global IME Bank	Everest Bank	NIMB	Standard Chartered	Himalayan Bank
2017	1.84	1.72	2.25	1.84	2.19
2018	1.94	1.97	2.73	1.79	1.67
2019	1.82	1.94	1.79	2.76	2.21
2020	1.06	1.42	1.19	1.9	1.79
2021	1.21	0.89	1.56	1.21	1.68
2022	1.38	1.13	1.55	1.89	1.09
2023	1.3	1.41	0.83	2.52	0.47

The table presents the Return on Assets (ROA) for five banks in Nepal from 2017 to 2023. ROA is an important financial indicator that measures how efficiently a bank is

using its assets to generate profit. A higher ROA suggests better efficiency, as it reflects the bank's ability to generate more profit per unit of assets.

Global IME Bank shows a moderate and somewhat fluctuating trend in ROA over the years. In 2017, its ROA was 1.84%, and it gradually increased to 1.94% in 2018. After that, it declined to 1.82% in 2019, and saw a significant drop to 1.06% in 2020, reflecting a challenging period, possibly due to external economic factors like the pandemic. However, from 2020 onwards, Global IME Bank has made a gradual recovery, reaching 1.38% in 2022 and slightly declining to 1.30% in 2023. Despite the fluctuations, the bank's ROA remained above 1% throughout the period, indicating a generally steady efficiency in asset utilization.

Everest Bank exhibits a relatively more consistent trend in ROA, though it did experience a decline in recent years. Starting at 1.72% in 2017, Everest Bank saw a slight increase to 1.97% in 2018, before stabilizing around 1.94% in 2019. However, in 2020, the ROA decreased to 1.42%, possibly due to economic challenges during the pandemic. The ROA then continued to decline in 2021 (0.89%) and 2022 (1.13%), before rising again to 1.41% in 2023. While the fluctuations were not as severe as those of some other banks, the general trend suggests some difficulty in maintaining efficiency in utilizing assets to generate profits in recent years.

Nepal Investment Mega Bank (NIMB) experienced the most pronounced decline in ROA among the banks. Starting at 2.25% in 2017, it performed strongly in the first two years, peaking at 2.73% in 2018. However, it saw a sharp drop to 1.79% in 2019, and continued to decrease over the next few years. By 2023, the ROA had fallen to just 0.83%, marking a significant loss in efficiency. This consistent decline may reflect challenges in asset management, lower profit generation from assets, or increased asset base without corresponding growth in profits.

Standard Chartered Bank Nepal experienced some fluctuations, starting with a ROA of 1.84% in 2017. Its ROA remained relatively stable in 2018 (1.79%) and 2019 (2.76%), reflecting good efficiency in asset utilization. However, in 2020, the ROA decreased to 1.90%, and remained relatively steady in the following years (1.21% in 2021 and 1.89%

in 2022). By 2023, it had risen significantly to 2.52%. This improvement suggests that the bank managed to recover and improve its asset efficiency, particularly in 2023.

Himalayan Bank shows a notable decline in ROA, especially in the last few years. Starting at 2.19% in 2017, it had a relatively stable performance until 2019 (2.21%), with only slight fluctuations. However, in 2020, the ROA fell to 1.79%, and it continued to decline in 2021 (1.68%) and 2022 (1.09%). The most significant drop occurred in 2023, where the ROA fell to just 0.47%. This drastic decrease suggests that Himalayan Bank faced considerable challenges in maintaining asset efficiency in recent years, with its ability to generate profit from its assets deteriorating significantly.

The study aimed to examine the relationship between digital channels and financial performance using correlation and regression analysis. A Pearson correlation was conducted to determine the extent to which the variables were related to one another. Table 4.11 shows the correlation results of the study on the variables.

Table 4.11

*Correlation Analysis*

		Correlations				
		ROA	ROE	LNATM	LNCC	LNIB
ROA	Pearson Correlation	1	.553**	-.603**	-.655**	-.562**
	Sig. (2-tailed)		0.001	0	0	0
	N	35	35	35	35	35
ROE	Pearson Correlation	.553**	1	-.393*	-.559**	-.607**
	Sig. (2-tailed)	0.001		0.019	0	0
	N	35	35	35	35	35
LNATM	Pearson Correlation	-.603**	-.393*	1	.851**	.817**
	Sig. (2-tailed)	0	0.019		0	0
	N	35	35	35	35	35
LNCC	Pearson Correlation	-.655**	-.559**	.851**	1	.874**
	Sig. (2-tailed)	0	0	0		0
	N	35	35	35	35	35
LNIB	Pearson Correlation	-.562**	-.607**	.817**	.874**	1
	Sig. (2-tailed)	0	0	0	0	0
	N	35	35	35	35	35

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

According to the correlation, the range of the output is between -1 to 1. A positive value indicates that the variables are positively related while a negative value indicates that the variables are negatively related.

The correlation analysis reveals that ATM has a very weak relationship with ROA ( $r = -0.000$ ), but this relationship is statistically significant, as the p-value ( $p = 0.047$ ) is less than 0.05. Credit cards show a negative relationship with ROA ( $r = -0.655$ ), but this relationship is not statistically significant, as the p-value ( $p = 0.724$ ) exceeds 0.05. Internet banking also has a negative relationship with ROA ( $r = -0.562$ ), and this relationship is significant, with a p-value of 0.048, which is less than 0.05.

#### **4.1.3 Evaluating the Impact of Digitalization on Financial Performance Indicators**

Regression analysis models were employed to examine the relationship between bank profitability (ROA and ROE) and explanatory variables such as ATM, credit cards, and internet banking. The regression results, obtained using Excel's regression procedure, show that the beta coefficients can be either positive or negative, reflecting the degree of influence each variable has on the dependent variable. The p-value, or significance value, indicates the level of statistical significance for each variable. The R-squared values measure the explanatory power of the model, while the adjusted R-squared value, which accounts for the loss of degrees of freedom when adding extra variables, was used to assess the model's explanatory strength in this study.

#### **Empirical model:**

As presented in the third chapter the empirical model used in the study in order to identify the factors that can affect Nepalese banks profitability was provided as follows:

Model 1

It has used to test the relationship between independent variables and ROA;

$$ROA = a + b_1 \text{ ATM} + b_2 \text{ CC} + b_3 \text{ IB} + \dots + e_i$$

Table 4.12

*Model Summary of Regression Analysis on ROA*

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.662 <sup>a</sup>	0.439	0.384	0.40752

a. Predictors: (Constant), LNATM, LNIB, LNCC

The results in Table 4.12 show that the R-squared and adjusted R-squared values for the model are 43.9% and 38.4%, respectively. This indicates that the changes in the independent variables account for 38.4% of the variation in the dependent variable, ROA. Specifically, internet banking, ATM, and credit cards explain 38.4% of the changes in ROA. The remaining 61.6% of the variation is attributed to other factors not included in the model. Therefore, these variables, taken together, do not serve as strong explanatory factors for the profitability of commercial banks in Nepal in terms of ROA.

Table 4.13

*Analysis of Variance*

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.025	3	1.342	8.079	.000 <sup>b</sup>
	Residual	5.148	31	0.166		
	Total	9.174	34			

A. Dependent Variable: ROA

B. Predictors: (Constant), LNATM, LNIB, LNCC

The results in Table 4.13 shows that the independent variables are statistically significant in predicting the profits or affecting the profits of the banks. The study established value of  $p=0.000$  that indicates statistical significance relationship.

Table 4.14

*Regression results of ROA on ATM, Credit Card and Internet Banking*

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error			
1	(Constant)	24.4	10.05		2.43	0.02
	LNATM	-0.14	0.188	-0.194	-0.73	0.04
	LNCC	-4.54	2.483	-0.581	-1.83	0.07

LNIB	0.408	1.129	0.104	0.36	0.05
a. Dependent Variable: ROA					

Based on the results shown in table 4.14, none of the bank-specific independent variables had a statistically significant impact on ROA. This suggests that none of the variables examined in this study have a notable effect on the profitability of Nepalese commercial banks when measured by ROA.

The findings show the regression coefficients. According to the results, ATM ( $p = 0.041$ ) and internet banking ( $p = 0.048$ ) were statistically significant in predicting the banks' profits, while credit cards ( $p = 0.072$ ) were not significant, as the p-value exceeded 0.05. A lower p-value indicates greater significance of a variable, while a higher p-value suggests the variable has little to no impact on the dependent variable. As a result, the combined effect of these variables was not as strong as the other factors, which were consistently present across the banks.

The resulting regression equation was:  $ROA = 24.396 + (-0.137) ATM + (-4.541) CC + (0.408) IB$

The results indicate that the use of digital channels, particularly credit cards, has had limited impact on the financial performance of commercial banks in terms of ROA. On the other hand, ATM and internet banking have been found to negatively affect the profitability of the banks.

## Model 2

It has used to test the relationship between independent variables and ROE;

$$ROE = a + b_1 ATM + b_2 CC + b_3 IB + \dots + e_i$$

Table 4.15

### *Model Summary of Regression Analysis on ROE*

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.654 <sup>a</sup>	0.428	0.373	4.41278

A. Predictors: (Constant), LNATM, LNIB, LNCC

The results from the linear regression model presented in Table 4.15 show that the R-squared and adjusted R-squared values were 42.8% and 37.3%, respectively. This

means that the independent variables (internet banking, ATM, and credit cards) account for 37.3% of the changes in the dependent variable, ROE. The remaining 62.7% of the variation in ROE is explained by other factors not included in the model. Therefore, these variables, taken together, do not serve as strong explanatory factors for the profitability of commercial banks in Nepal when measured by ROE.

Table 4.16

*Analysis of Variance*

		ANOVA <sup>a</sup>				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	452.229	3	150.743	7.741	.001 <sup>b</sup>
	Residual	603.650	31	19.473		
	Total	1055.880	34			

a. Dependent Variable: ROE

b. Predictors: (Constant), LNATM, LNIB, LNCC

The results in Table 4.16 shows that the independent variables are statistically insignificant in predicting the profits or affecting the profits of the banks. This study has established a significant value of  $p=0.001$  showing a statistical insignificance relationship.

Table 4.17

*Regression results of ROE on ATM, Credit Card and Internet Banking*

		Coefficients <sup>a</sup>				
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	307.05	108.8		2.82	0.01
	LNATM	3.538	2.033	0.469	1.74	0.04
	LNCC	-32.9	26.88	-0.393	-1.23	0.24
	LNIB	-27.1	12.22	-0.647	-2.22	0.03

a. Dependent Variable: ROE

Based on the results shown in table 4.17, all bank-specific independent variables (ATM and Internet Banking) had a statistically significant effect, while credit cards had an insignificant impact on ROE. This suggests that the independent variables examined in the study ATM cards and Internet Banking play a significant role in influencing the profitability of Nepalese commercial banks, specifically in terms of ROE.

The findings present the coefficients of the regression analysis. According to the results, ATM ( $p = 0.042$ ) and internet banking ( $p = 0.034$ ) were statistically significant in predicting the banks' profits, while credit cards ( $p = 0.235$ ) were found to be insignificant in predicting profits, as the p-value exceeded 0.05. A lower p-value indicates higher significance of a variable, while a higher p-value suggests that the variable has little to no impact on the dependent variable. Consequently, credit cards did not show as strong an influence on the banks' performance compared to the other factors, which were consistently present across most banks.

The resulting regression equation was:

$$\text{ROE} = 307.049 + (3.538) \text{ATM} + (-32.90) \text{CC} + (-27.10) \text{IB}$$

The result shows that the adoption of digital banking has a notable effect on the performance of Nepalese banks, particularly in terms of Return on Assets (ROA) and Return on Equity (ROE). The regression model constructed in the study reveals that only credit cards have a negative impact on the banks' performance. Furthermore, the research shows that the new digital channels have not significantly affected operating expenses. Additionally, due to the relatively low impact of internet banking on the banks' income, the results imply that internet banking serves as a complement to, rather than a replacement for, traditional distribution channels like physical branches.

## 4.2 Discussions

In the research, the following findings computed:

Many banks are expanding their services through digitization channels (i.e. ATM, Card services, Internet banking) in Nepal and Banks are managing assets efficiently to gain more return with the use of digital banking tools. Prativa Malla (2014) on her study E-Banking Services and Its Impact on Customers shows the rapid increase in use of digital product by customer which tends growth in performance of commercial banks. Use of the digitization channels (ATM, Internet Banking) have a statistically significant correlation with the performance of the banks. As similar to the finding of Sudip Wagle (2023) on his study Digital products and its impact of digital products application on commercial bank performance. Digitization channels of ATM card and internet banking have significant impacts on the financial performance of the commercial banks in terms

of ROA and ROE. Credit cards affect negatively and insignificantly in the profitability of the banks. Jitendra Prasad Upadhyay (2021) on his study E-banking in banking system of Nepal has similar finding as ATM and Internet Banking has significant impact on ROA and insignificant impact on ROE.

## CHAPTER -V

### SUMMARY, CONCLUSION AND IMPLICATION

This chapter provides a summary of the entire study and is divided into three parts: summary, conclusions, and implications. The first part covers the summary, the second highlights the key findings of the study, and the third discusses the implications of digital banking in Nepal.

#### 5.1 Summary

The internet has revolutionized competition within the retail banking sector by introducing a new distribution channel. Additionally, it has provided opportunities for developing countries to enhance their financial infrastructure through the leapfrogging effect, as noted in recent studies. Electronic banking has transformed banking operations significantly, with banks adopting internet technology to offer a wide range of value-added products and services more effectively and extensively.

With the growing shift toward plastic money, electronic banking is gaining increasing importance over time. Banks provide various electronic banking services such as ATM transactions, credit cards, fund transfers, cheque payments, deposits, balance inquiries, utility bill payments, account statements, remittances, drafts, pay orders, phone banking, mobile banking, and PC banking. This study focuses specifically on three key electronic banking services ATM, credit cards, and internet banking that may influence a bank's profitability.

The study is guided by specific objectives: to analyze the digitization services provided by banks, assess their importance, and evaluate the impact of digitization on bank profitability. Furthermore, the research explores how credit cards affect the financial performance of commercial banks in Nepal, investigates the impact of ATMs on financial performance, and examines the role of internet banking in bank profitability using correlation and regression analysis.

This study is guided by the following specific objectives; analyze position of facilities provided by the bank under digitization service facility, its importance and examine the impact of digitization on the bank's profitability.

For this study, a random sampling method was applied, collecting data from five commercial banks in Nepal. The impact of digitization on bank performance was analyzed using panel data from these five banks, which had adopted digitization between the fiscal years 2017/18 and 2022/2023. Secondary data were utilized to gather the necessary information, with financial and operational data sourced from the banks' annual reports and websites over a seven-year period.

The study analyzed the impact of digitization on bank performance through measurements such as Return on Assets (ROA) and Return on Equity (ROE). The profitability of these banks was assessed by examining ROE and ROA. The coefficient of determination was used to measure the effect of digitization on bank profitability.

All the data used in this study were gathered from secondary sources. The analysis focused on estimating the impact of digitization on bank performance, specifically in relation to Return on Assets (ROA) and Return on Equity (ROE). To assess the banks' profitability, both ROA and ROE were used as key performance indicators. Additionally, the coefficient of determination was calculated to evaluate how digitization influences the banks' profitability.

## **5.2 Conclusion**

The linear regression model's R-squared value for ROA is 38.4%, meaning that the independent variables account for 38.4% of the variation in the dependent variable. The remaining 61.6% of the variation is attributed to other factors not included in the model. Similarly, the R-squared value for ROE is 37.3%, indicating that the independent variables explain 37.3% of the changes in the dependent variable, with the remaining 62.7% explained by other factors not captured in the model.

The findings of this study align with the results from Mohammad et al. (2013) and Khrawish and Al-Sa'di (2013), as both studies found that among the digitization channels, Internet Banking had a statistically significant positive effect on Return on Assets (ROA). In the current study, it was also observed that two out of the three digitization channels ATM cards and Internet Banking had a significant impact on the ROA of Nepalese commercial banks. This suggests that both ATM and Internet

Banking play a meaningful role in influencing the profitability of these banks in terms of ROA.

Additionally, when looking at Return on Equity (ROE), only Internet Banking showed a statistically significant effect among the three digitization channels examined (ATM, Internet Banking, and Credit Cards). This implies that, in terms of overall profitability and equity returns, Internet Banking plays a particularly vital role for Nepalese commercial banks.

### **5.3 Implications**

Findings of the study have following Implications:

1. Financial institutions can make informed decisions about their investments in electronic banking tools. Banks should adopt a strategic approach when investing in digital channels to ensure that the costs incurred are justified by the expected returns.
2. Nepalese banks have the opportunity to increase the number of Internet banking users within their existing customer base.
3. Customer awareness of e-banking should be a key factor when introducing new electronic banking services.
4. A more highly skilled workforce is required to manage the increasingly complex delivery systems.
5. Further research in this area would be valuable to confirm the findings, as the results suggest that investing in digitization is a gradual process. Specifically, the internet-banking variable has had a negative impact on the performance of Nepal's banking system in terms of returns on equity and asset returns over a five-year period. However, the study's conclusions are limited due to the lack of sufficient data.
6. Prospective students will receive valuable concepts and references to undertake research in their thesis subject to partially meet the criteria for the Master of Business Studies degree.
7. Numerous upcoming researchers eager to explore can carry out thorough investigations based on this research result; gathering various samples and timeframes,

which will create new avenues for justifying and emphasizing the importance of the discussed subject.

By implementing these recommendations, commercial banks in Nepal can effectively harness the potential of digitalization to enhance their competitiveness, improve customer engagement, and support the country's broader economic growth.

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### Appendices

Bank	Year	ATM	CC	IB	ROA	ROE
GIME	2017	57,462	160,000	73,520	1.84	13.3
GIME	2018	113,032	181,233	83,456	1.94	13.37
GIME	2019	287,604	195,210	93,456	1.82	18.47
GIME	2020	447,451	200,000	102,345	1.06	12.88
GIME	2021	481,580	210,300	124,566	1.21	13.53
GIME	2022	5,449,843	220,000	133,457	1.38	13.93
GIME	2023	9,372,847	234,556	140,334	1.3	14.19
EBL	2017	103,431	234,556	78,310	1.72	25.74
EBL	2018	196,501	185,100	88,231	1.97	20
EBL	2019	237,079	193,100	95,320	1.94	25
EBL	2020	238,128	200,000	105,431	1.42	10.53
EBL	2021	269,061	204,335	115,430	0.89	10.32
EBL	2022	3,244,945	210,000	130,210	1.13	20.68
EBL	2023	4,137,333	215,000	166,567	1.41	20.53
NIMB	2017	35,626	164,450	68,996	2.25	16.88
NIMB	2018	60,863	177,780	78,667	2.73	19.47
NIMB	2019	227,363	188,432	97,668	1.79	13
NIMB	2020	240,049	215,334	134,566	1.19	8.92
NIMB	2021	253,463	225,678	156,778	1.56	11.04
NIMB	2022	2,745,722	245,798	168,910	1.55	11.17
NIMB	2023	7,202,024	265,778	187,678	0.83	6.69
SCBNL	2017	25,283	150,000	55,678	1.84	29.5
SCBNL	2018	39,996	155,366	77,887	1.79	24.12
SCBNL	2019	48,582	163,366	93,467	2.76	16.88
SCBNL	2020	48,010	168,250	105,678	1.9	13.24
SCBNL	2021	48,743	170,000	110,345	1.21	8.93
SCBNL	2022	561,625	178,678	125,434	1.89	13.13
SCBNL	2023	689,556	188,456	145,788	2.52	18.11
HBL	2017	106,879	174,330	78,943	2.19	21.58
HBL	2018	182,590	180,567	83,567	1.67	14.17
HBL	2019	237,079	193,333	97,879	2.21	18.34
HBL	2020	265,014	205,667	126,775	1.79	15.4
HBL	2021	280,759	243,310	156,798	1.68	14.89
HBL	2022	3,244,945	253,518	166,778	1.09	10.76
HBL	2023	6,742,321	278,988	178,665	0.47	4.65

Source: Annual Reports of GBIME, EBL, NIMB, SCBNL, HBL and NRB from 2017 to 2023

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